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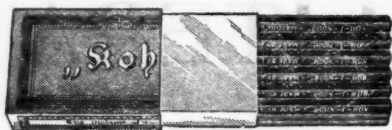
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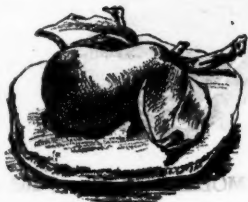
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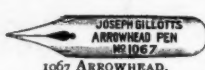
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Some Cautions to be Observed in Child Study.

By Ossian H. Lang.

The exuberance of the first proselytes in child study has given many a speaker and writer of a satirical turn of mind an opportunity to say witty things about pedagogic fads. The truth is, that some of these enthusiasts did appear ridiculously pompous when they solemnly told how Johnny winked, and what Nellie said, and how Charlie neighed like a horse, having been cajoled into the belief that this was genetic psychology done in a scientific way. However, all things new have a grotesqueness all their own, and it is this very grotesqueness which helps to make them talked about. The critic has, in more than one way, aided the introduction of the very thing he was opposed to, by croaking about it too noisily.

Notwithstanding all the funny stories that have been aimed at the efforts of the advocates of child study, not one sane and intelligent person has seriously doubted the pedagogic value of an intimate knowledge of children. It may be that sometimes a speaker fond of smart argument is heard protesting that special, conscious child study is unnecessary to a successful education; but he invariably defeats his own scoffings by the logic of the appended attempts at proofs. True, there are many good educators among mothers and teachers who know a great deal about children, though they have never heard of child study; but does that prove that they never studied children? It is an absolute waste of time to attack or defend child study from this direction; sophistry is not a branch of present-day pedagogics.

While the *raison d'être* of child study cannot be denied, the methods in vogue in this particular field are certainly open to criticism. And, indeed, Prof. Münsterberg is justified in sending a stray shot at the kind of child study which has at present a monopoly.

Most of the mistakes in methods have their origin in mistaken views of the motif of child study.

Some there are who think they have discovered in child study a means of revising the fundamental truths of pedagogy, a new kind of higher criticism, as it were. These friends are usually very gullible, and are apt to swallow whole in their enthusiasm many of the psychomantic morsels served up by yellow psychologic

experimenters in yellow Sunday journals. Being extremists, they will hardly remain true to their worship of pedagogic metaphysics long enough to feel the awful disappointment that might be in store for them, and we need not shed one single tear in their behalf. Child study has not come to destroy foundation principles, nor to deprive them of one jot or one tittle of their vital force.

With many others, child study is a pretty toy. Volumes of genuine, adulterated, and bogus sayings of children have been published for their special delectation. Sometimes the credulity of these friends is rather severely tried by the bright little books purporting to be collections of children's sayings. I have not found one interesting publication of this kind which does not contain a number of cute counterfeits mixing truth and fiction in a most fascinating way. Even Dr. Sully has not been able to keep his books of child studies free from colored statements which add considerable brightness to the collection, but can hardly be expected to have pedagogic or psychological value.

The trouble with the general run of children's sayings is, that they are so decidedly commonplace that a collection of them would have but little selling power. The love for fairy tales is not stored away with the top and the doll; adults enjoy them fully as much as the children, and a flavor of them seems to be necessary to make child study palatable to those whose sole object is to be entertained.

Child study, to be sure, is not the one and all of education, but it is too serious a matter for simple diversion. It is a pity that a great many earnest teachers have been led to regard written collections of miscellaneous child observations as helps to their educational work. It may be laid down as an axiom that these observations have full value only for the one who gathered them; to others they may be suggestive, but nothing more. One might as well attempt to study botany in a library or from an herbarium bought of some collector. With every observation put down in writing there is connected a residuum of experience which remains concealed.

I do not wish to be understood as decrying study of the records of child observers in general. A great deal of valuable thought may be gathered from such studies of individual children, as those of Perez and Preyer, and the preserved character sketches, written under the direction of Basedow, Pestalozzi, Herbart, Ziller, and others. But the feature of greatest worth is again the suggestiveness of these records, and not the observations themselves; in other words, their chief value is to be found in the method pursued in gathering the observations.

[Here Mr. Lang spoke of the value of complete in-

dividuality pictures of pupils prepared by the teacher her own for pedagogic guidance.]

It is in child study as it is in nature study; there is too much reading of books and too little actual observation.

There seems to be no agreement as to what is really worth studying. The majority of leaders in this child-study field point to physiological studies, and here much valuable work has been done in recent years. But these studies have really no direct bearing upon education. They merely establish the physical and physiological factors which must be considered in pedagogic procedure. Nor are teachers generally capable of carrying on these investigations in a scientific way.

What good does it do to set teachers on a hunt for bacilli, for cases of myopia, chorea, neurasthenia, and other physiological defects? All this is the business of the medical practitioner who is skilled in pathological diagnosis, particularly the school physician. The fact that many schools are still without medical inspectors does not invalidate the justice of the position here taken.

The day must come when a school physician is considered as necessary as a teacher; but meanwhile any medical diagnoses teachers may be led to attempt are worse than useless, unless the teacher happens to be one of the very few who have an intelligent acquaintance with human anatomy and physiology. Even under the most favorable conditions, it is doubtful whether a teacher could make any practical use of this sort of data. Where there is no regular medical inspection, there ought to be at least a thorough annual physical examination by a physician. At any rate, no child should be admitted to any school without a medical certificate setting forth his physical defects, if there are any.

It may be that there are many here whose views are diametrically opposed to mine as regards the value of anatomical and physio-psychological studies of children carried on by teachers who have no preparation for making reliable diagnoses of this kind. Still, I believe to have disposed, at least to my own satisfaction, of the futility of making child study a substitute, instead of one of the aids of pedagogics, the danger of allowing it to become a mere toy, instead of laboring for its development into a serious research in the interest of education, and the blunder of putting lay people to work on investigations which only a thoroughly-trained physiologist can conduct with profit, I may now turn to those schemes which have at least the appearance of justice and pedagogic usefulness. It may be well to consider briefly the various motifs from which these latter plans may originate:

Firstly, the child study may be conducted *in the interest of psychologists*. These studies, so called, may consist either in the mere collecting and recording of observations, or an actual experimentation on children. The former is of doubtful value; the second, decidedly pernicious. No doubt, experimental psychology occupies an important field, and those teachers who are qualified to assist in its development may be justified in contributing data. But how they can expect ever to get any pedagogical returns is more than I can see. Then there is much danger that the psychological amateur work will

deprive ambitious teachers of what little rock bottom they have to stand upon. Psychologic experimentation on children ought to have as little place in the school as vivisection. It is not necessary, and opens the way to grave dangers.

Secondly, there are child studies conducted *in the interest of pedagogy*. The usual procedure is that teachers are requested, by some one who is, or thinks he is, expert in determining educational values, to furnish particular facts about children. Those who thus aid in the accumulation of data may thereby obtain many practical hints. The collector's gain is rather doubtful, unless he is favored with an unusual amount of native shrewdness and possesses experience coupled with thorough pedagogic insight. Even then, he will be safer if he relies only upon such information as is gathered under his direct supervision. It is a well-known fact that most of the child studies of this character are mere summaries of nicely-classified prejudices and opinions generally which reflect what teachers would have stated in similar terms without going to the trouble of a special investigation. It may be replied that usually the children's answers to certain questions are gathered. Even that changes the result but slightly. Children, like the "grown-ups," are not willing to aid in any scheme that will reveal their weaknesses. A great deal of nonsense has been proclaimed with solemnity, purporting to be revelations of children's likes and dislikes. "What books, what songs, what games, do you like best?" and other inquisitories of similar character give birth to so much guessing as to what the teacher would be pleased to hear, that the result will not add one iota to our capital of pedagogics. And right here let me add that I am firmly opposed to all methods of prying and spying into the child soul, unless there is serious and absolute need for it. The child's secrets must be respected, and the things which appear most hallowed to him must not be rudely handled. How many of you would be willing to answer pointed questions touching your thoughts concerning your innermost feelings? Respect the child!

Pedagogy has gained much from such studies as Hall's "Contents of Children's Minds." The caution to be observed in investigations of this sort is, not to mistake a knowledge of words for ideas, and vice versa. It is very difficult, at times, to draw any definite conclusions. Many students of normal schools and colleges stand high in psychology who have not the penumbra of a psychological idea. They might as well have gathered their knowledge from a dictionary. Nowhere else is so much caution required as in examinations into the knowledge contained in a child mind. I think that I do not hit far off the mark if I say that seventy-five per cent. of the injustices committed by teachers are due to defective methods of examinations, intended to be studies of the contents of children's minds. Even the best of teachers are human, and that means they see the child, not as he really is, but as he looks through their apperceptive spy-glasses. Such work as has been done by Dr. Rice ought to prove particularly helpful as suggestive of what every superintendent ought to do.

I thank the president of this department for his courtesy in making my subject read, "Some Cautions to be Observed in Child Study." He evidently suspected

that I would not furnish him anything complete anyway, and his consideration for your comfort also deserves special commendation. Let me, then, conclude my paper with a few fragmentary remarks, embodying some of my convictions concerning the purposes of child study and the methods employed in carrying them out.

Nothing final must be expected from child study. Every human being surrounds himself with some reserve, and even if teachers could look right into the child soul, they would not be able to understand it.

The most fruitful line of child study is that which aids the teacher to determine the effect of his teaching upon pupils, to find out whether the children have grasped ideas, or only words, and to watch their educational growth. Studies of this kind are really self-examinations, and ought to be invaluable sources of counsel as regards choice of studies and form of instruction.

Closely allied to the latter form of child study is that which tests the educability of pupils. This includes the study of their educational needs, as well as of their capacities. If rightly conducted it will prove a valuable aid to a recognition of what is good for the pupil, and what is best adapted to further his growth.

Really profitable educational child studies can be conducted only by trained teachers who possess pedagogic knowledge, skill, and, above all, tact and love of children. Trained educators derive from child study invaluable data revealing the educational needs of their pupils, and they turn it to good account also in the testing of the effect of their methods of teaching.

Child study does not aid in the discovery of *what* is best to give the child to supply his educational needs. This fact is often lost sight of. It may be, for instance, that we can determine the child's likes and dislikes in certain directions, but we do not find through child study the pedagogical treatment needed.

The child's appetites are not a reliable index to his needs. A boy, and a normal one at that, may be fonder of green apples than of oatmeal. There is no such thing as spontaneous recognition of what is good for him. Some teachers have found that children can be fed even on grammar.

Still the children's appetites and interests must be studied. It is absolutely necessary that they should be known. Economy is the watchword of modern pedagogics. The study of interests reveals the lines of least resistance in the child's make-up. Child study here serves the most useful purpose.

A strong argument in favor of training in systematic child study is that teachers thereby acquire habits of child study, chief among which is the habit of looking constantly for the educational effect of their teaching upon and in the development of their pupils.

Just one more word and I am done. All child studies must have behind them, under them, and within them, an educational or pedagogic purpose, if they are to be of any help to teachers. Before beginning an investigation, it must be known what to do with the result.

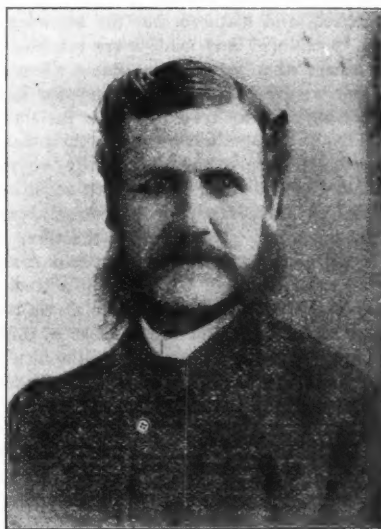
[Paper read before the Child Study Dept., N. E. A., at Washington, July 11, 1898.]

Manual Training, Purpose and Value.

By Job Barnard, Member of the Board of School Commissioners of the District of Columbia.

Manual training has received such general attention, and has been actually in vogue under widely differing conditions and circumstances, for such a length of time, and with such favorable results, as to carry it beyond the stage of experiment, and to insure it a permanent position in the public-school system. It is incumbent upon officers and boards charged with the duties of school administration to make provision for it in the most liberal and general ways that may be found useful or expedient in their several localities.

Many municipalities have already provided commodious, convenient, and substantial buildings, with machinery and power, tools and material, and a corps of good teachers, for the use of these schools, their pupils usually coming from the high schools. We are happy to be able to state that Congress has just placed its approval upon this kind of education by an appropriation of \$12,000, for the establishment of kindergartens in the public schools of the District of Columbia, and \$125,000 for the purchase of ground and the erection of a building for a manual training school.



Albert G. Lane, Chicago, Ill., who has been made assistant superintendent of the schools of Chicago at a salary of \$6,000. Pres. Andrews, of Brown, takes his place as superintendent.

We need more kindergartens, and more such special buildings for the manual training schools, all over the country, with the best teachers that can be obtained; but we also need smaller shops and convenient rooms in the vicinity of the graded schools where pupils of every grade may have the advantage of this kind of training, modified to suit their several states of advancement and growth.

We may assume that manual training includes all systematic training of the various faculties of the body, as part of a general scheme of education, by actual doing. This doing of real work cultivates the motor nerves, as well as the nerves of sense; it develops the muscles and tissues of the body; it stimulates and strengthens the brain.

To be of use in the city, the central office, or telephone exchange, must have wires running to it from it, which can there be connected. If the wires all terminated at the central office, without possible connection, the message sent might cause a plethora of knowledge at that point; but of what use would it be to the business of the city? So, if the brain was constituted and disconnected in such a manner that all the impressions or dispatches received by it from the outposts, the extremities of the body, or from

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any part of the environment in which the body moves, were retained by it, and there were no motor nerves by which this knowledge could be expressed, or sent out again to other brains, no progress could be made, and the accumulation of knowledge by any individual mind could be of no use to others. But, happily, it is a law of life, that so soon as the child acquires knowledge, he endeavors to give it expression by word or act; and by the getting and giving of knowledge the sensor and motor nerves are both used and developed; and the brain to which they are both attached becomes the useful central office or exchange, and is expanded and strengthened by its use.

There is one fact which seems to distinguish manual training from all other kinds of education; namely this, that it involves a plan, pattern, or idea, simple or complex, to be thought out, formed, and executed. This requires mental effort first, and then a positive physical exertion, to express the conception in material form. It also requires the concurrent operation and co-operation of mind and body, and not the exercise of either independently. We must think while we work, and work while we think. If we would obtain useful knowledge, we must not only read, hear oral teaching, commit to memory, and meditate on what we have learned, but we must endeavor to tell what we know to others, and to apply our knowledge to the practical uses of life, by doing with our might whatsoever our hands find to do. By this, the doing faculty is not only developed, exercised, and matured, but the knowing faculty is also enlarged, disciplined, and made more reliable. When we try to teach others what we think we know, we are surprised to find out that we are not certain of our own knowledge.

Speaking literally, manual training means the training of the hands; but as hands are symbols of power, their training really signifies a systematic use of the whole body, so as to put it under the control of the mind, and thus to acquire the power to execute skilfully, accurately, and promptly, whatever is undertaken by the mind. The doing of the thing planned is not, in the educational sense, for the purpose of making something of commercial value, or for teaching a trade; but it is for the purpose of acquiring the power to do as one wills to do, or may be useful. It is for the purpose of mind-making, sense-sharpening, brain-culture; to have all the faculties of seeing, hearing, tasting, smelling, and feeling, quickened, cultivated, and perfected; and the power to form correct judgment created.

Many years ago I read a story written by Henry Ward Beecher, entitled "Norwood," and I remember only a single sentence and a single character in the book. The character is Abiah Cathcart, a New England farmer, of whom the author said, that "he first thought out his work, and then worked out his thoughts." This is what is required of every pupil in a manual training school.

As a layman, I may be excused if I make a mistake by claiming too much; but I think the term is broad enough to include kindergarten work, drawing, penmanship, cooking, cutting, fitting, and sewing, modeling in clay and sand, with or without other tools than the hands themselves, as well as tool work in the shops; but I believe that the term as defined by school men, who have given the subject much careful study, is more restricted in its meaning, being strictly used to include only "the training of the hand in the use of tools and in practical drafting as a part of a system of general education." It is claimed by them that it does not include kindergarten work, laboratory work in science, and illustrative teaching, on the one hand, or the teaching of trades on the other.

MANUAL TRAINING IN THE PUBLIC SCHOOLS OF WASHINGTON.

Mr. John A. Chamberlain, director of manual training in the District of Columbia, prepared, in 1890, a teachers' manual, in which he defined the term in the following words: "Manual training, as understood in the public schools of this city, includes everything in the course of study in which the hand does a part. It includes clay modeling, stick laying, and paper cutting and folding in the lower grades; freehand drawing in all grades; paper-modelmaking, sewing, cooking, and bench work in the upper grades; and cooking, freehand and mechanical drawing, molding, forging, and machine work in wood and metal, and work in the botanical, physical, and chemical laboratories in the high school."

Since 1890, the sewing department in the District of Columbia has grown to include cutting and fitting, five schools now being conducted for this work, and they are attended by the girls of the sixth grade. Plain sewing is only taught to girls of the third, fourth, and fifth grades, and in the rooms devoted to other school purposes. The girls of the seventh and eighth grades attend the cooking schools, and sewing is not taught to those above the sixth grade. Modeling in clay, from nature, is taught to the pupils in all the grades; and carving in clay is taught from the fourth grade to the eighth.

It has been the aim in the Washington schools to make some form of manual training applicable to every child in every grade from the kindergarten to the high school. This has involved some original work, or modification of the forms of work more frequently taught in the secondary schools. How well we have succeeded in our aims must be left for others to judge. We do not claim that what we have attained is perfection, but we do claim that an examination will disclose an application of the practical idea of manual training in every year of public school work in this district, as a purely educational exercise.

We have fifteen shops, located conveniently for the boys of the seventh and eighth grades of the white schools, where carpentry is taught. Here they design and make those things usually designed and made in such schools. They use tools, but no power, except their own hands. They are allowed much freedom in choosing the article to be made, within certain limitations, and whatever is undertaken is constructed on correct scientific principles. They make boxes of different shapes, screens, stools, tables, stands, desks, book-cases, cabinets, and other things. The boys of the Central high school attend the machine shops on O street, where they have use of steam power. There are six carpenter shops for the boys of the colored schools, located singly, three in the city, and three in the district outside the city, besides three in the Miller building on H street, where they have steam power, and where one machine shop and one blacksmith shop are also located, making eleven shops in all. Mr. J. H. Hill is the director in charge of the Miller building and the three carpenter shops in the city; the three in the district outside the city are under Mr. Chamberlain's direction.

The colored boys of the sixth, seventh, and eighth grades attend these shops, with a few from the fifth grade. The colored high school also sends a few boys to the shops in the Miller building.

The girls from the colored schools are learning sewing, cutting and fitting, and cooking with as much interest as the white girls.

For further details of the work of our schools, and for some very interesting and able papers on this subject, I refer to the board of trustees for the year ending June 30, 1897; particularly to the valuable reports therein of Supt. Wm. B. Powell, and of Director John A. Chamberlain. Besides these, the reports of Dr. F. R. Lane, director of the high schools, Mrs. Susan E. W. Fuller, director of drawing, Mr. E. S. Jacobs, director of cooking, and Mrs. M. W. Cate, director of sewing, all contain interesting matter on the subject of manual training. In the same volume, the report of the various officials and teachers of the colored schools will also be found of much interest, as showing how readily the pupils of these schools take hold of practical work of this kind.

The purpose of manual training, as already indicated, is to raise the standard of character and scholarship, and to develop more evenly and perfectly the growing mind. It is to teach children their own capacities for doing things; how things can be done; what it is possible for willing hands to accomplish, and what is beyond their power. It is to inspire self-reliance and confidence in the intelligent, and to check the egotism of the ignorant.

While its purpose is educational, and its greatest value to develop the mind, to

"Hew off the block and get out the man,"

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there are other incidental results which may be expected from this training, all of which have their value.

It helps the young man or woman to decide with better judgment upon a vocation; it removes prejudice, and inspires respect for those who do the work of the world; it increases the intelligence of the mechanic, and enables him to do better work, and to command higher wages; it lessens crime by furnishing something useful and interesting "for idle hands to do;" it discourages the growth of that helpless, impracticable individual, who is educated above his capacity, and has more knowledge than he can use, and who is characterized by Pope

as

"The learned blockhead, ignorantly read,
With loads of learned lumber in his head."

Another result that may be expected from this training is that it will make men and women more trustworthy, more capable of truth-seeing and truth-telling. The eye is trained to see correctly, and positively, and the mind to judge truly at the same time. If sight is clear, and judgment sound, and expression accurate, then the bystander, on whose testimony life, liberty, and property often depends, and who has no wish to give any false impression, is enabled to tell the truth, and justice is done to the neighbor. The witness who is most capable of telling the exact truth, according to my observation and experience of many years in the trial of causes before judges and juries, is the man who has been trained in designing, drawing, and making things. The civil engineer, the architect, the builder, are representatives of this class. They can tell what they see so as to make others see it correctly. They can distinguish between condition and a theory; between a fact and an illusion; between the true and the false, and their evidence will often enable a court to reach a just conclusion, where otherwise it would seem impossible.

I suppose that every boy raised on a farm has always wanted to do something new, that was beyond his ability to do well, rather than to content himself with doing such work as he could properly do. The reason of this seems apparent. It is the self-activity of the growing boy; he is reaching out for something more than he himself can do; something that a man does. The work usually assigned to him, such as turning a grindstone, using a rake or hoe, feeding the stock, and bringing in wood, is all well enough from an economic standpoint, but it is mere drudgery to the boy. There is no mind in it; it requires no thought, no planning, no designing; he wants to "make a hand," and take on the responsibility of some job on his own account. As soon as he has learned to do a thing automatically, without thinking about it, there is no more education in it, and from an educational standpoint, it would be better to set him a new task; or, what is still better, if possible, give him his choice of two or more new tasks.

In the winter, the country boy usually goes to school, and does chores night and morning, with a full day's work on Saturday. When spring comes, he probably has to quit school and help in the field.

As a rule, the city boy has no such opportunity for the exercise of his self-activity in manual work, and hence does not get the vigor of mind and body by mixing study with work that the country boy does; and for this reason, needs the manual training school most, and needs it early in his school life. The boy that grows to maturity on the farm, not only lays in a good supply of energy, but actually accumulates considerable general knowledge, if he is inclined to take advantage of "rainy days and Sundays" for reading and study; and yet he knows less, as a rule, than the city boy. Why is it, then, that he so often outstrips the city boy in the race of life, and becomes distinguished as a man when he enters upon a career of business or politics in the cities? I think it is due to the power to execute; and this executive ability is acquired by the actual doing of things in the growing period, when brain and muscle, will and understanding, are being made in the daily life on the farm.

I once heard a prominent member of the cabinet deliver an address at a banquet on Pres. Lincoln's birthday. He said that Mr. Lincoln was sometimes spoken of as an uneducated man. He wanted to correct history, in so far as that impression may have been believed, and to deny it. He said that Mr. Lincoln had unusual educational advantages. Thrown

upon his own resources in early life, he had learned and practiced all kinds of work on the farm, and with his father's carpenter tools; had lived in three new states of this union; had aided in building a flat boat, and making two voyages to New Orleans with produce for market; and in his leisure moments had learned to read, write, and cipher, and had acquired a taste for good literature, all before he was twenty-one years of age; and such a life of work, travel, and study, while he was growing up, had laid the foundation for that noble character, that gentle soul, that intellectual power, which made him so much loved and honored.

I need not now take time to give you other instances, where character and learning acquired under similar circumstances, have led to the highest positions of trust and honor in this country. They are familiar to you all; your reading and acquaintance will suggest many such.

Where the work performed is wholly planned by some other mind, and the one that executes is merely the hand of the other, there is not that growth of brain and nerve for either that there is where the mind that plans, and the hand that executes, are united in the same person. Hence, while there is great discipline in working in factories, for railroad companies, in telegraph offices, in all kinds of machine shops, the education is not so beneficial as where the workman has to use more mind. It is true, he acquires regular habits, and a quick ear, a steady hand, a sound judgment, about the special thing he is set to do, but learning only one thing, that soon becomes ineffectual, and the mind does not increase from the merely automatic bodily activity.

The great numbers now being educated in agricultural colleges, technical, industrial, and trade schools make it evident that there is a growing demand for better trained men and women to do the higher class work required by our advanced civilization. The public school should assist in supplying this demand, and in fostering the inclination for such courses in the minds of its pupils.

Mind, when reduced to its simplest terms, is composed of only two faculties, will and understanding. These may also be represented by the terms affection and thought; impulse and intellect; love and wisdom; heart and head; goodness and truth.

Both of these faculties must be exercised and cultivated, if a perfect mind is to be formed. The will, or desire to do, and to have is not to be repressed, but it is to be drawn out, directed, and instructed until the understanding matures and the judgment is formed.

The pure imagination and the good emotions are to be awakened. The perfect form of created things should be made plain in thought; and then the thought should be clothed, or embodied, or ultimated in the material form.

The pupil in the manual training school should see clearly that every picture, statue, house, church, cathedral, city, monument, car, bridge, ship, everything made by the hand of man, first had its existence in the will. To carry out the will or desire of the builder, he had first to study the subject, so as to arrange the details in his mind, and form his plans in thought; then to gather and prepare his materials, and put his working plans on paper; and then to attain the end wished for by giving the thought the material body in which it can be seen by others. Thought can never become visible, except when it takes on a material form, either in spoken words, sounds formed by the vocal organs, or written words, symbols, formed with the pen, or type; or pictures; or the concrete form, made by the hands, tools and machines, from wood, stone, metal, or other material.

By all this training the will is developed, as well as the understanding; the emotions are cultivated; the taste, the love, the affection, is elevated and purified; and the whole man is perfected, morally, physically, and intellectually; and this is the end and value of all true education.

(Paper read before the Department of School Administration, N. E. A., July 8, 1898.)

There will be no issue of this paper during the weeks ending July 30 and August 6 and 13. The next number will appear on August 20.

Education Manual Training.

True Tests.

By Chas. H. Keyes, Holyoke, Mass.

The teacher should be, first of all a teacher, not an artisan or an engineer. His special should be, first of all, education, and not some branch of mechanical art. The manual-training teacher, too, needs rather more of the teaching art and the philosophic training which alone can give the power to study human development accurately, because this must, in the nature of things, be largely individual work. He is compelled to know books well, tools better, boys best.

Any justifiable course in manual training is not to be made up after the manner of a composite picture, or by putting together the most striking of the models used in a dozen of the best-known manual-training schools in the country. It can be made up by continuing the practical experience of good manual training teachers with those results of modern investigation of the nature of the pupil to be taught.

Without motor education, some important brain areas never become highly serviceable for any purpose. The education of the mobility of any portion of the body educates the sensibility of the specific brain areas involved, as well as developing strength and precision of the movements.

Training to steadiness of central movement must precede exercises for accuracy of peripheral movement. The boy more quickly reveals his weakness in mental ability in the manual-training-room than in the history class-room. He who undertakes to plan a course of study in manual training without reference to the psychological and physiological reactions of its exercises, is but a blind groping. No course whose development is solely along the line of growing stubbornness of material and increased number and complexity of the tools called into use, is likely to result in true education.

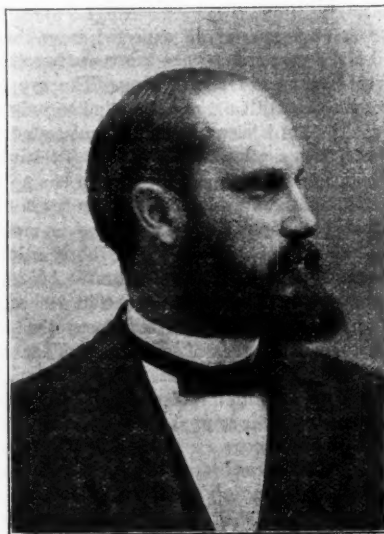
We go on establishing isolated manual-training high schools and accepting for them the stamp of class schools. Setting these schools off by themselves completes the work begun by removing from the curriculum the traditional culture branches; and this despite the fact that the girl in a literary course or the boy in a classical course may need more than others the development that the manual-training work will bring.

In methods there has been the same disposition to imitate. For example, the early manual-training high schools based the work in mechanical drawing on the course in woodwork, des-

pite the fact that no teacher, no draughtsman, no mechanic, believes that the sequence and development most logical and natural for a course in needlework would be at all desirable for a course in mechanical drawing. There must be originality in our methods of manual training—methods based on reason, and not on tradition.

The methods must be the product of live, sympathetic strength, rather than of blind tradition.

Extracts from an address before the Dept. of Manual and Industrial Education, N. E. V.

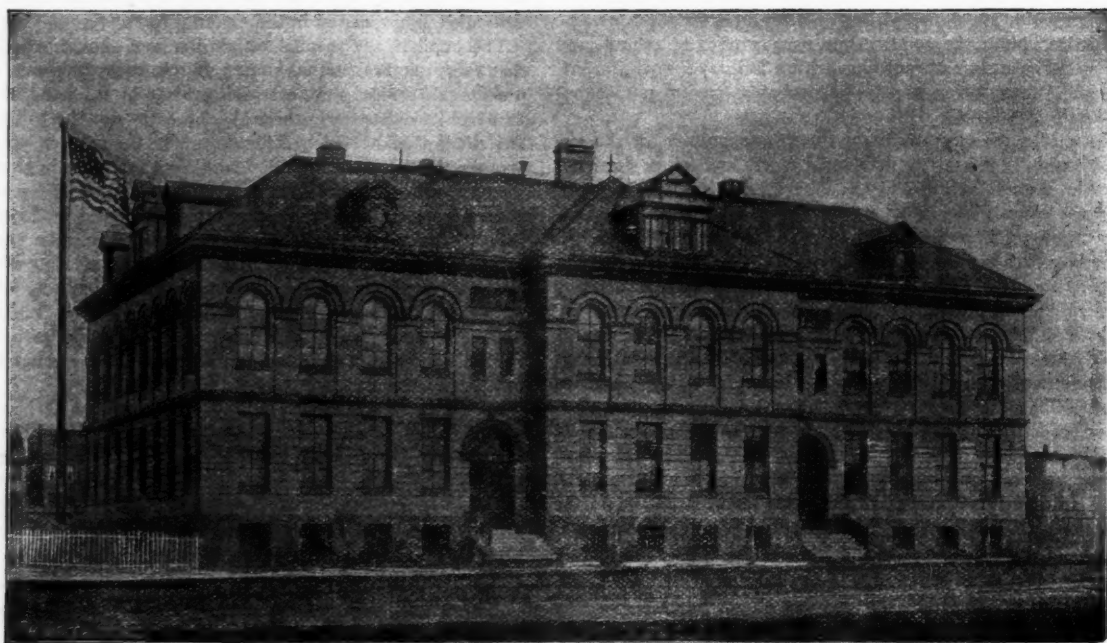


J. A. Foshay, Supt. of Schools, Los Angeles, Cal.

Los Angeles has been chosen as the place for the next meeting of the National Educational Association, in July, 1899.

The vote of the board of directors stood as follows:

Los Angeles,	-	-	-	-	20
Salt Lake City,	-	-	-	-	12
Portland,	-	-	-	-	8
Tacomah,	-	-	-	-	3



St. John's Avenue School, Binghamton, N. Y.

National Educational Association.

Department Meetings.

Below are given reports of nearly all the sessions of the various departments of the N.E.A. Abstracts of a great number of important papers were published last week, and a few additional ones appear in the present number. Reports of the general sessions of the National Council and the departmental sessions omitted from this number will be printed during the month of August.

Kindergarten Department.

The opening address of the Kindergarten Department was made by Mr. E. Peckman Mann, of this city, who spoke earnestly of the work accomplished by kindergartners and their value in the community. He said that this system of education was introduced into Washington in 1871 and, in consequence of the interest aroused by Miss Elizabeth Peabody. School authorities have been convinced of the need of kindergartens by the success of those which have been maintained by private subscriptions. Congress has this year consented to the request of the school board of the District of Columbia, to establish kindergartens in the public-school system.

Miss McCulloch, of St. Louis, presided. Miss Elizabeth Harrison, of Chicago, not being present, her paper was read by her niece, Miss Grace Fuller.

The vice-president of the Kindergarten Department, Dr. Jenny B. Merrill, of New York city, spoke on the great efforts of the kindergartens to bring nature into their work. The children play with sand, shells, and pebbles; they design with seeds; they mount leaves and flowers; make tiny forms and gardens in window boxes and in the sand. All winter the children treasure cocoons, and are wild with joy when the real fairy story comes true in the spring; they watch fishes, snails, turtles, and pollywogs in the aquarium. Not only does she long to bring nature to the child, but far more to take the child to nature. Miss Merrill quoted reports from Philadelphia, St. Louis, Chicago, and Boston, giving accounts of outdoor children's gardens. In St. Louis, one enterprising kindergartner turned an old brick yard into a living flower garden, helped in her work by eighty little children.

"Ideal Play of the Kindergarten" was discussed by Miss Susie Pollock, of Washington. She pleaded for recognition of a child's spontaneous activity; an activity which means growth of mind and body and spirit, to show interest in their thoughts and plays; to be in sympathy with their games, and so influence and direct their inherent activity to a higher and more controlled expression.

SECOND SESSION.

The subject of discussion at the second session was "The Influences of the Kindergarten Idea."

Supt. F. Louis Soldan, St. Louis, opened with a glowing tribute to the influence of kindergarten training, not only in primary departments, but throughout the school system, even penetrating the doors of the university. He contrasted the process of the "new education," as it is called, of unfolding the child mind, training his sense perception, and opening his eyes to a recognition of eternal verities with the old-fashioned didactic text-book methods. From the standard of a teacher of many years' experience, as well as from a philosophical standpoint, he claims the kindergarten to be a vital necessity in the important work of educational development. Mr. Soldan gave high tributes of praise to the philosophical insight of Dr. W. T. Harris, who has so advanced the philosophy of education and to the noble perseverance and magnificent mind of Miss Susan E. Blow, who he claims has done more than anyone else for our rapidly-perfecting system of education, not only in the kindergarten, but to the very doors, and through them of universities.

Miss McCulloch then rose to present Mrs. Kraus-Boelte, and spoke of the curious coincidence that made to-day the twenty-fifth anniversary, not only of Mrs. Boelte's life as a trainer, but also of the day on which she read her first paper before the N. E. A., which met in Elmira, N. Y. Miss McCulloch commented on this jubilee of twenty-five years spent in behalf of children and the influence exerted over child life, and read some charming verses on the subject.

Mrs. Boelte then read her thoughts, born of ripe experience on "The Development of the Inner Life of the Child," an abstract of which appeared in *The School Journal* last week. At the close of the paper beautiful roses were presented to Mrs. Boelte.

Mrs. James L. Hughes gave a "Kindergarten Message to Mothers," in which she said that, "We as women have not honored ourselves enough as mothers. While to many mothers an increase of family seems to take away leisure and opportunities of cultivation, she has in reality the opportunity to fit herself for the highest human office—that of motherhood. As Froebel's idea of childhood comes to be accepted as the true interpretation of Christ's love for children, we face the conclusion, that parents are responsible for the training and unfolding of their children, as well as for heredity."

The officers elected in this session are: President, Mrs. Maria Kraus-Boelte, New York city; vice-president, Miss

Florence Lawson, Los Angeles, Cal.; secretary, Miss Alice Parker, Washington, D. C.

Over 300 persons registered in the "Kindergarten Register." Of these, 119 are active, and thirty, as students and graduates. Representatives came from Ontario, Massachusetts, New York, Pennsylvania, Maryland, California, Colorado, Virginia, West Virginia, District of Columbia, Kentucky, Indiana, Illinois, Iowa, Missouri, Utah, Nebraska, North Dakota.

Miss Elizabeth Harrison, of Chicago, spoke on "The Inherent Spirituality Concealed in Humanity."

Elementary Education.

Pres. Hailmann announced that, owing to the enforced absence of two of the speakers, the program would be slightly different from that announced.

MANUAL TRAINING.

Miss Mary F. Hall, supervisor of primary work in the schools of Milwaukee, Wis., spoke on "The Value of the Hand



Mary F. Hall, Supervisor of Primary Education, Milwaukee.

in the Acquisition of Knowledge, and Expression of Thought." Miss Hall is an enthusiast on the benefits of manual training, and showed conclusively that only by employing and directing the natural energies of the healthy child can the best development of his brain cells be attained, and that hence manual training is an essential feature of successful education, both mental and moral.

Supt. George Griffith, of Utica, N. Y., proclaimed himself a friend of manual training, which he had long advocated, and which he had introduced into the schools of Utica and other places. But it was necessary, he said, to utter a word of caution against giving too prominent a place in the school course to this work. "It has its place, and we must give it its due share of attention," said the speaker, "and it is a stroke of policy to recognize it as a part, and a part only in education." At one time it was necessary to exaggerate the place of manual training, in order to introduce it in the school; but there is danger nowadays of losing sight of the fundamental law that self-activity is not to be limited to manual work.

Mr. Griffith went on to say that reasoning is as truly self-activity as the exercise of the hands, and that teachers must recognize the fact.

The part of the brain devoted to motor activities is large, compared with other sections, and in exercise through the hand this part of the brain is educated, and it was shown that in manual training one of the most important channels, both of attaining and expressing knowledge is opened; and to be of real value, must be begun when the child is young; yet, there is no danger of mistakes when we hold that our instruction should be all objective. "Use objects, in order to get rid of objects, and to establish the fundamental ideas so clearly that we may work without objects," was a law of instruction which Supt. Griffith impressed forcibly upon his hearers.

The speaker closed his most interesting remarks with the statement that he had observed that children universally took more interest in manual training than in most other things, and therefore it should be used, not only in the shop, but applied in all lines of school work.—geography, arithmetic, draw-

ing, etc.—to cultivate the imagination of the children, giving life to the work through the hands.

The second paper of the session was delivered by Prin. Richard Waterman, of the Chicago schools, who illustrated his address on "Manual Training in Elementary Schools" by descriptions of the work as carried on in the Chicago system.

One of the most interesting features of his paper was an account of the teaching of domestic science, where not only is cooking taught to the girls, but housekeeping in all its branches, from bedroom to cellar.

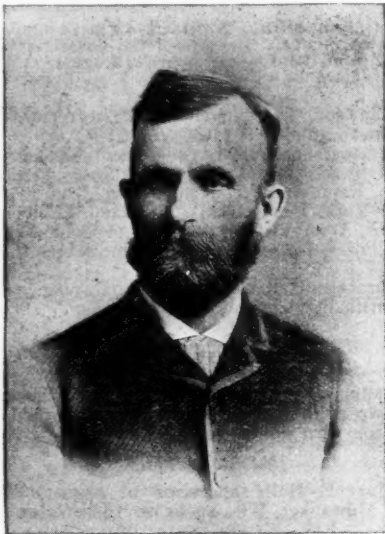
"Manual training, to be of value," said Mr. Waterman, "must be with a purpose," for only so are the best results attainable, inculcating accuracy, promptness, and neatness.

SOCIAL EFFORTS OF PUPILS.

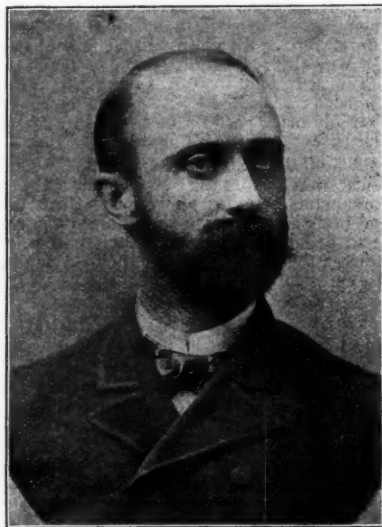
Mr. Waterman was followed by Supv. B. C. Gregory, of Trenton, N. J., who was to have discussed a paper by Mr. Hughes, of Toronto, on the desirability of fostering the social effort on the part of the pupils. In the absence of Mr. Hughes, the subject was most admirably treated by Mr. Gregory, who showed the disadvantage of the old system of holding children to arbitrary standards of competition. The only true measure of each child is himself, and rivalry is always opposed to helpfulness, and the fostering of the best spirit in a class. He showed that the child who, though possessing small capacity,

Joint Session Secondary and Higher Education.

At the joint session of the Departments of Secondary and Higher Education Dr. James M. Green, state normal school, Trenton, N. J., spoke on the questions, "Are there studies that, as constants, should be pursued in some measure in every course in the secondary schools, and in the freshman and sophomore years of college? If so, what are these constants, and what should be the minimum requirements in each in these six years?" In the course of the discussion, Dr. Green said that most schemes of education err in being found with reference only to what should be, without regard to what it is. The conditions actually existing must not be overlooked. Not only the present, but the future, life should be considered, and not only the individual, but society. This question, he said, should be preceded by another question; viz., Are there common lines of mental activity which continue from the secondary school into the first two years of college? Evidently, there are; as, for example, those of mathematics, language, and history. Under the head of mathematics Dr. Green said that arithmetic should be completed before entering the secondary school. After this point should come algebra, geometry, trigonometry, etc., to the close of the sophomore year. Language study should cover discussions of various subjects in the styles of the most marked power. The practice of requiring a certain few literary works as entrance condition to college in language is unfortunate, as it leads students to devote attention to these works alone to the neglect of other equally important subjects and styles. All of the classic and standard writers are included in the list which Dr. Green recommends, and nearly every theme



Supt. George Griffith, Utica, N. Y.



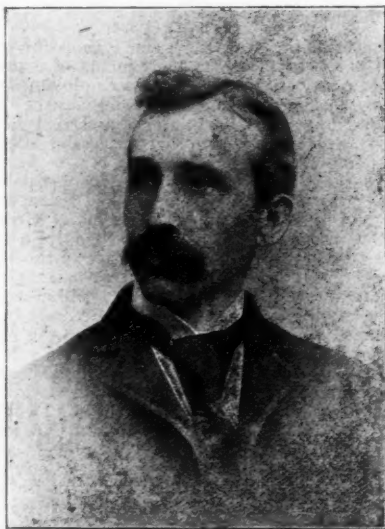
Dr. James M. Green, Principal, State Normal School, Trenton, N. J.

connected with government or society which is of general interest.

History instruction in simple narrative form should be begun with children even before they are able to read for themselves. The aim of history study should be the principles of government, the advantages, economical and political, of different forms of government, the traits of character which are of greatest value in political and social leaders. In closing, Dr. Green made a strong plea for those three studies as constants, mathematics, language, and history.

Prof. Frank Thilly, of the University of Missouri, opened the discussion of the paper by outlining his view of the fundamental constant in education. This is the facility of breaking up the world as it comes to the individual in experience, and then re-constructing it to serve the needs and purposes of the individual. Prof. Thilly thinks that the natural sciences should be added to the list of Dr. Green. Three years of such study, three hours a week, should be devoted to these sciences. As a minimum, Prof. Thilly recommends two years. The speaker took up the mental sciences. He would require two years for history, one for economics and politics, and one at least for psychology and ethics. Referring to language study in secondary schools, Prof. Thilly called words the frozen concepts and judgments of mankind. Language begins with facial expressions and gesture, and develops into the use of symbols. Four years for language were recommended, the time being devoted chiefly to modern languages.

Mr. Ramsey, of the Fall River (Mass.) high school, continuing the discussion, referred to the paper and discussion of Dr. Green and Prof. Thilly as interesting, scientific appreciations of different branches of knowledge. He regards it as a mis-



Supt. B. C. Gregory, Trenton, N. J.

does faithful work, is worthy of as much or greater praise than the naturally bright pupil who stands at the head of his class. Mr. Gregory closed his remarks with those most beautiful

take to think that we are able to say just what lines should be universally pursued by students. He would go no farther than to prescribe English and one other language in the secondary school and in the first two years of college, leaving it open to students to elect. Mr. Ramsey spoke of his own view as "educational heresy," but his opinion is based upon experience.

Mr. Robinson, of Rock Island, spoke in confirmation of the view of Mr. Ramsey on the basis of his own experience. He considers that we must make a minimum of requirement in the essentials and leave the question as to other studies for students and their parents to decide. We should adhere neither to a purely elective nor to a pure requirement policy in the secondary schools.

Mr. J. M. Davis, superintendent of secondary schools of Iowa, emphasized the necessity of plenty of good reading for the moral and civic training of pupils.

Prof. A. T. Ormond, of Princeton university, emphasized the need of the pupil for guidance and direction in the choice of studies. He would not make one rigid requirement for all, but requires one or more of several alternative courses. Very often neither the pupil nor his parents is able to elect wisely. There are certain constants, such as language, nature study, history as including some instruction in political and social principles. Our educational experiences should be taken into account in the consideration of this question.

In closing the discussion, Dr. Green limited the question to the matter of constants. It is not the question of electives. Dr. Green wishes to deprecate the idea that the child is able to choose his own studies. Natural science, manual training, drawing, and other subjects need to be taught, but not as constants.

Prof. Thilly emphasized the point that the question is not a purely experimental one. We cannot treat such problems by an experimental, laboratory method, such as we use in physics or chemistry.

The second paper was presented by Prof. M. V. O'Shea, of the Wisconsin state university, on "The Better Preparation of Instructors for Secondary Schools." Education was considered a development of knowledge for its own sake. Froebel and Pestalozzi promulgated the view that childhood has its own laws of growth. An outgrowth of this thought is the necessity of educating the teacher for his special work of instruction. Prof. O'Shea traced the history, in brief, of the instruction of teachers of secondary schools. He considers that our present facilities for this purpose in America are very poor and meager. An interesting account of the preparation for teaching found by actual examination of teachers in several sections of the country was a revelation of the actual facts. An able discussion of the needs of the instructor for his work and the nature of the training which will satisfy those needs followed. In many cases secondary teachers fail to interest their pupils; to make them feel that they understand and sympathize with them. Not only the theory, but the practice, of instruction should constitute the preliminary training of the teacher. A thorough comprehension of the needs of teachers as qualifications for their work was manifested throughout the paper.

Prof. Walker B. Jacobs, of the Providence (R. I.) high school, presented the view that the defects of teachers are due to failure to satisfy demands made upon them. First and most important is the demand for knowledge of the subject by the teacher. More teachers are wanting in knowledge of their subject than in knowledge how to teach. A second demand is that of method. This comes historically from Froebel and Pestalozzi. It is a demand for recognition by the teacher of the principles of growth in knowledge. The mind naturally proceeds from particulars to universal principles, for example, and not from principles to particular facts.

Miss Connally, of Washington, spoke of some students who take the theory of teaching before they study the subjects which they are to teach. This is unfortunate, but promising. Mr. Roberts, from Missouri, emphasized the need of practical tact and an honest interest in the pupil for his own sake, as well as an interest in the subject for its sake. Prof. Hinsdale, of Michigan university, mentioned two points of view from which the teacher views his subject—the academic and the educational—the subject for its own sake, and the subject as an educational tool, which, in the hands of a competent teacher, may mold the pupil. The academic training of the teacher must go before the professional training, and we should not emphasize the latter to the neglect of the former; yet, too much knowledge is possible.

Mr. Buchanan, of Missouri, spoke on "The Natural Endowment of the Successful Teacher for His Work." Those who fail after years of experience, as a general rule, would not have been helped materially by normal training, although the speaker believes in the special preparation of teachers for their work of instruction.

In closing, Prof. O'Shea remarked that the secondary school is not the only place where poor teaching exists. There is more poor teaching in the universities than in the high schools. A high-school teacher should be a college or university graduate, nothing less, and state examiners should require of them a normal training in addition to knowledge of the subjects to be taught. This is the practical solution of the educational problem.

Secondary Department.

FRIDAY AFTERNOON.

The session opened with about two hundred present. The subject discussed was "English and Rhetoric in the Secondary Schools."

After the election of Mr. R. R. Upton, principal of the Chillicothe high school, as assistant secretary in the absence of Mr. E. G. Cooley, Prin. John C. Hanna, of Columbus, O., read a paper on "English the Core of a Secondary Course." Many studies at present find their place in the high-school course that should be left to colleges and universities, such as psychology and higher mathematics. The speaker bitterly criticized the present college entrance requirements as necessitating pupils reading many authors and works that are utterly devoid of interest. Mr. Hanna urged (1) English, a required study throughout the first eight years; (2) English, a required study for every course and pupil throughout every year of the secondary course; (3) English, in its grammar, history, composition, rhetoric, literature, the core of all courses of study in all grades, particularly in the secondary schools, about which all studies should be arranged, and all demands, both of calling and life, may be fully met.

Prin. Samuel Thurber then discussed "Some of the Main Principles of Secondary English." English study in the secondary schools divides itself into three parts: (1) Training in the use of language; (2) the study of English literature; and (3) the scientific study of the English language. Language is acquired only by absorption from contact with an environment in which language is in perpetual use. The youth absorbs only when his interests are aroused; hence, the great thing is to provide an environment from which the speech may be absorbed. Manuals of exercises in language are worse than useless. The great means of teaching English, both for vocabulary and formal correctness, are reading, writing, and speaking. Writing in any modern school is constant; there should be no day without a line. The English teacher may, and usually must, make his composition work periodic. Composition themes may be anything that interests youth. All compositions must be written for the sake of saying something—the best possible thing the writer can evolve. All the rhetoric to be taught should be in the teacher's mind and habits.

Miss Charity Dye, of Indianapolis high school, followed with "A Proposed Four-Years' Course in English for Secondary Schools." Printed copies of this course were distributed through the section, with explanatory comments, giving Miss Dye's assumptions, in holding that the course proposed is sound, stating the problem in hand in the teaching of English, the basis for selection of literature, the order of discourse, forms and provisions of the course.

Mr. W. F. Webster, of Minneapolis, presented a "Syllabus of a Course in English." This syllabus covers four years, providing for narrative and descriptive composition for the first year, exposition the second year, and for clearness, force, and elegance of sentence-structure in the third year; first semester, novels, and versification and criticism; second semester, and for pretentious compositions approaching two thousand words each, in the fourth year, under the critical supervision of the teacher.

Remarks were made by Prin. Lyon, of New Jersey, Prin. Ramsay, Fall River, Prin. Thurber, of Boston, and others.

Higher Education.

The Department of Higher Education was called to order by Pres. R. H. Jesse, of the University of Missouri.

NO UNIVERSITY COURSES WITHOUT COLLEGE PREPARATION.

Dr. Nicholas Murray Butler, of Columbia university, presented a paper on the question, "Should the under-graduate curriculum of four years in colleges and universities be shortened by allowing such freedom of elective in the junior and senior years that a bachelor degree and a professional degree may be obtained in six years?" Mr. Butler is the originator of this plan of arranging studies in Columbia university, and has always maintained a deep interest in the workings of the system. He referred to the necessity of a course, a broad, liberal culture preparatory to professional training. There are only two strictly professional schools in America; viz., the Howard law school and the Johns Hopkins medical school, using the term in the sense of schools which cannot be entered until a college course has been completed. We have altogether too many schools of law and medicine in America, many of them being carried on as private investments, which bring large returns to the proprietors; they admit students, very often, without any liberal education whatever. The time has come when law and medicine are no longer learned by professionals. The college seeks to place a liberal education underneath the professional training. The college stands between the preparatory school and the professional course, and must show that it can fill the time in such a way as to compensate for the time and money spent. The truth is, that the college can scarcely effect its aim, and the reason is obviously the fact that the student must be twenty-five or thirty years old before he can settle down in life; but wherever the college is a part of a university, and the range of electives is very broad, the student may

elect in such time a way as to enter his professional course of training at its second year, instead of at the first. His electives can thus be made to cover the first year of the professional course.

At Columbia university, the arrangement of the course is such as to make this possible, and Mr. Butler says that it has resulted in these electives being taken by students who never expect to take professional courses afterward. This is especially true of the law courses, though it is also true of the scientific and the medical courses also. There are certain studies in mental science, in political science, etc., which all students desire, and these are made available to all in the junior years.

All this is possible only in cases where the college is a part of the university system. In the 420 or 430 colleges in which this is not the case, the question arises whether the course should not be reduced to three years. After reducing the entrance requirements, the professional schools have lengthened their courses, and the question whether the law and medical courses should not be extended over from four to seven

land. Our college will be about equivalent, on its classical and scientific sides, to the German gymnasium and the Real schule.

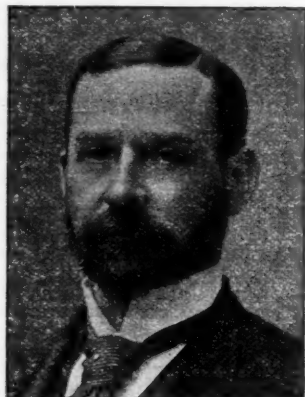
Prof. A. T. Ormond discussed the question of shortening the college course. The method of shortening the college course in years is one with which Prof. Ormond is not in sympathy. The four years of college, each of them, are the most important years in the history of an individual. Human life and their value is too great, both to the individual and to society. In place of the reduction in years, Prof. Ormond suggests a re-organization of the educational system as a whole, so that the secondary course will not contain studies which can be omitted until the college course.

Pres. J. M. Baker, of Colorado university, emphasized the need of some step in the direction of saving time now lost. He favors the re-organization plan and the arranging of studies so that a year can be saved by election. He fears we may possibly be forced to shorten the college course, in order to save it. Young people are short-circuiting the college course continually.

Prof. King, of Grinnell college, Ia., thinks there is the same difficulty with reference to the high-school course. Probably the professional courses should contain only subjects of professional value, and be preceded by some sort of liberal education.

A FEDERATION OF COLLEGES.

The second paper was presented by Dr. B. A. Hinsdale, of Michigan university, on the question, "Is it possible and desirable to form a federation of colleges and universities in the United States similar to the national federation of medical schools?" As to the success of this federation, Prof. Hinsdale says it has been measurably useful and successful. The organization, briefly outlined by the speaker, its aim and method seem most commendable in themselves. The elevation of the colleges and universities waits upon the development of other institutions and of the natural resources of the country. If a federation of higher educational institutions will help this elevation we should have it. Many colleges attempt graduate work without possessing the means of doing it. Very often



Pres. R. H. Jesse, University of Missouri.

years, is continually discussed in our day. The real solution is not this, but rather to raise the entrance requirements, and to eliminate those studies now included in the professional curriculum, which are not immediately connected with professional training.

Dr. William B. Smith, of Tulane university, New Orleans, discussed the paper of Dr. Butler. He does not think the experiment of Columbia university is a radical solution of the problem. There is a great deal of waste due to proper organization and adjustment in our educational system. A great step toward this will be a cutting into two of the college courses, and the policy outlined by Dr. Butler is really one step in this direction. The policy of Columbia university is really a shortening of the college course; but the natural point of cleavage is at the beginning of the junior instead of the senior year. The German schools give to their pupils about the same training at the age of fourteen or fifteen years which our students get in freshman or sophomore years. Our present college course, without sacrificing any of the culture elements which it contains, may terminate with the sophomore



Pres. J. M. Baker, University of Colorado.

year; and the student may begin his professional training at the age of eighteen or nineteen years. We may say two years. This result is now being accomplished in Germany and Eng-



Dr. Elmer E. Brown, Professor of Pedagogy, Univ. of California.

colleges and universities come into existence by duplicating the instruction of other schools when they are not necessary, to say the least. Possibly a federation might be able to exercise a wise restraint upon this tendency.

Such a federation would be useful in maintaining high entrance and graduation requirements. The federation need not be made national in its scope, to start with; the distances of different centers from each other might prove fatal to the movement.

There is plenty of needed work which such a federation could do. This could be done by discussion and co-operation. There are many obstacles to be overcome; but it is well worthy of thoughtful consideration and discussion.

Mrs. Ellen Richards, of the Massachusetts Institute of Technology, of Boston, introduced the open discussion of Prof. Hinsdale's paper by an interesting account of the Boston Alumni Association. Membership was limited to persons possessing a B. A. degree from some college or university of good standing. To determine what colleges possess this standing was difficult. The association has come to exercise an uplifting influence upon the curricula of colleges, and in some cases has been influential in preventing the granting of charters to colleges which would be a burden to the educational system of the country. Alumni interest themselves in the elevation of the curricula of their colleges.

Pres. J. M. Baker, of Colorado university, suggested a plan by which such a federation could be brought about.

LAW EXAMINATIONS.

Prof. Taylor, of the University of New York, spoke on the "Requirements for Law Examinations." The state of New York requires twelve years of pre-professional work from those who apply for examination for admission to the bar. It becomes necessary for examiners to know the standings of the colleges, the universities, secondary and primary schools, where this pre-professional work has been done. A federation of colleges and universities would be of great assistance to the examiners of the state of New York.

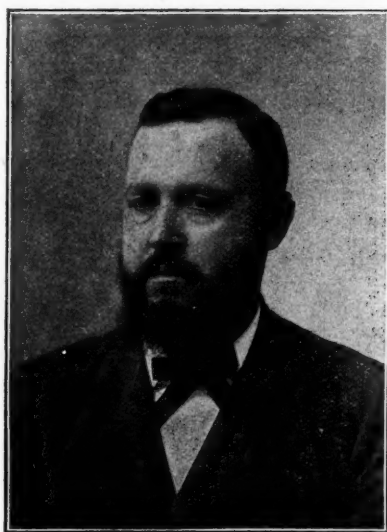
At the close of the general discussion, a committee was appointed to report next year on feasible plans of effecting such a national federation of colleges and universities.

The following officers were elected for next year: President, Dr. R. B. Fulton, chancellor of the University of Mississippi; vice-president, Dr. Elmer E. Brown, professor of pedagogy in the California university; secretary, Dr. G. A. Tawney, Beloit college, Wisconsin.

Normal Department.

Pres. H. H. Seerley, of Cedar Falls, Iowa, opened the normal-school section with an address, in which he said:

"The normal schools west of the Mississippi, and east of the Rocky mountains, are young; the population is mixed as to origin and language. The work of the teacher must be to unify the people; the demand is for good elementary teachers to do this. Salaries are small; the standard of qualification not too high. The normal school is the medium through which a better condition must come. To get light on this subject, three classes of people were consulted.



Pres. H. H. Seerley, State Normal School, Cedar Falls, Iowa.

First, college professors, who emphasized the need for better scholarship, who believed that the normal schools should be a part of the educational system of the state, with a complete unification of the system.

Second, city superintendents, who believed also that pupils are admitted before being properly prepared, and that many are graduated who were not fitted, either by nature or kind, for their work; that there is a tendency to make teaching a trade, instead of a profession.

Third, normal school teachers who see a necessity for scholarship equal to that possessed by those having had a four-years' course in a high school. The importance of the practice school and the necessity for much practice were granted by all."

NORTH CENTRAL NORMAL.

Normal schools in Ohio, Indiana, Wisconsin, and Illinois were treated by Mr. R. G. Boone, of Ypsilanti, Mich: "Here from the questions sent out and from the answer received, substantially the same results were obtained—that scholarship must be truer, broader, and surer; that the practice school must give the normal-school teachers the actual daily experiences that alone bring knowledge and skill, and save them in their professional life from the necessity of blundering."

PACIFIC NORMALS.

Pacific Slope normal schools were spoken of by Mr. E. T. Pierce, of Los Angeles, Cal. This report dealt in definite and

There will be no issue of this journal during the weeks ending July 30 and August 6 and 13. The next number will appear on August 20.

close data gathered from several California schools respecting subjects taught in the normal schools, the time devoted to



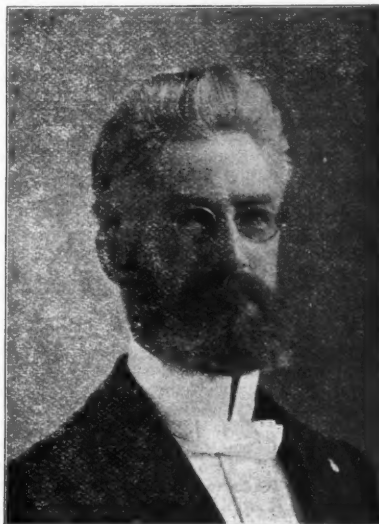
Pres. Richard G. Boone, State Normal College, Ypsilanti, Michigan.

each, and the time and value in relation to theory and practice.

SECOND SESSION.

State Supt. N. C. Schaeffer, of Pennsylvania, presented a report on the normal schools of the Middle states. Great differences exist among the normal schools of these states. New York and Pennsylvania have each twelve or thirteen normal schools, while New Jersey and Maryland have but one each. Conditions of admission into these schools vary in the different states, and perhaps to some extent even in the schools of the same state.

Dr. Z. X. Snyder, president of the Colorado state normal school, spoke on the "Training, Model, and Practice School." These terms were distinguished and defined. The training school should be both a model school, or observation school, and a practice school. The speaker described the ideal man or woman who should be the inspiring and energizing head of such school. The critic teacher should love children, nature, literature, and art. She must be in full sympathy with her pupil teachers. Frequent conferences of training teachers and pupil teachers should be held. The practice school should be the center of life in a normal school.

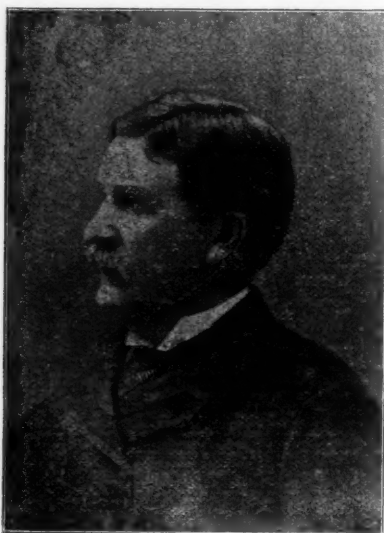


Pres. E. T. Pierce, State Normal School, Los Angeles, Cal.

The discussion of Dr. Snyder's paper was opened by Dr. Theo. B. Noss, principal of the California, Pennsylvania, state normal school. He emphasized the thought that the practice school should be made central and vital in the work of the whole normal school. All teachers in the normal school should be in full sympathy with the work of teaching which their students have to do when they go out from the school. The discussion was continued by Dr. Wilson, of Rhode

Island, Dr. J. N. Wilkinson, of Kansas, Dr. Downing, of New York, Dr. Taylor, of Kansas, and others.

The officers elected for the ensuing year are: President,



Dr. W. J. Milne, Pres. State Normal College, Albany, N. Y.

Dr. Theo. B. Noss, of California, Pa.; vice-president, Miss Marian Brown, of New Orleans; secretary, Prof. J. N. Wilkinson, of Emporia, Kansas.

Child Study Section

The interest in the subject is evidently not declining, for, as has been the case at every meeting of the N. E. A. since this section was organized five years ago, its program was listened to by a larger and more enthusiastic audience than those of any other department.

The president, Prof. M. V. O'Shea, of Madison, Wis., after referring to the progress of child study and the purposes of the movement, introduced as the first speaker Ossian H. Lang, the managing editor of *The School Journal*, who read a paper on "Some Cautions to be Observed in Child Study." He noted the tendency to collect unreliable anecdotes of children's sayings and reporting them as if they were facts of scientific instead of merely suggestive value and to set teachers to making investigations which only specialists are capable of carrying on successfully. The value of child study to psychology was then indicated, with the limitations and dangers that should be recognized. Really profitable educational child studies can be conducted only by trained teachers, who possess pedagogic knowledge, skill, and above all, tact and love of children. "The strongest argument in favor of training in systematic child study is that teachers thereby acquire *habits* of child study, chief among which is the habit of looking constantly for the educational effect of their teaching upon and in the development of their pupils." The paper is printed in full on another page.

Fred W. Atkinson, of Springfield, Mass., next read a paper on "A Year's Study of the Entering Pupils of the Springfield High School." A series of questions concerning the pupils who entered the high school there were asked of grammar school principals, high school teachers, parents, as regards health, temperament, character, scholarship, greatest ability or weakness, chief interests and home conditions, such as time for study, exercise, etc. The pupils themselves were also asked to answer the questions in regard to their reading outside of school. The teachers thus learned more about their pupils and the special needs of each individual, and the parents appreciated the interest shown in their children, so that much better relation and understanding is promoted. Some astonishing and serious facts were also learned as to neglect of proper eating and exercise by pupils and serious instances of worrying over studies.

The third paper, by Prof. Edgar James Swift, of the Stevens Point, Wis., normal, treated of "Heredity and Environment: A Study in Adolescence." Two hundred boys in the Waukesha reformatory. Their teachers were questioned, and as about 87% were in good health it would seem that heredity was favorable. As to mental ability, not quite one-third is reported as being good, which is only about half as large a per cent. as at the Elmira reformatory. Twenty-eight per cent. were fatherless and 31% motherless, while 22% have step-mothers and 15% step-fathers, and 32% report unkind treatment from step parents. Either insanity, epilepsy, or chorea was traced in 13% of the ancestry and 10% were of criminal ancestry, though in many cases were of convictions for drunkenness. Most of the fathers were laborers, many of them skilled, and according to the statement of the boys, 86% were good. The per cent. of the parents who were addicted to drink is 37, but the per cent. of drunkenness is little greater in the sons of drunkards than the others. A larger portion learned

to drink outside of the home than at home and more than half began to drink between 10 and 15 years of age. Suggestions from companions and from books read were evidently important educational influences. Most of them had spent a great deal of their time on the street. That children of criminals are not necessarily criminals is shown by the fact that 83% of the children of criminals placed in good homes by the Minnesota State School for Neglected and Dependent Children developed good character.

The age at which most of the boys of the reform school were sent there indicates that the criminal acts were usually performed at about the time of beginning adolescence, hence surroundings should be made more favorable, especially at that time so that their increased activity at this time may take right directions. It is doubtful whether in three-fourths of the cases criminal tendencies are anything less than a convenient name with which to cover our social failure in education."

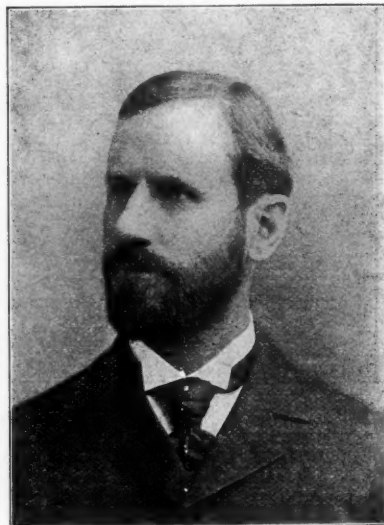
Owing to sickness, Prof. Thurber was unable to present his paper on "The Reading of Children in the Adolescent Period," and Dr. Albert Leonard, for an unknown reason, was not present.

After the close of the last paper all the topics were discussed in an animated manner, participated in by Prin. C. E. Keyes, of Holyoke high school, Prof. Coburn, of Chicago, and many others.

Physical Training

The meeting was presided over by Dr. Ehinger, president of the department. Dr. R. Tait McKenzie, of McGill university, Montreal, Canada, spoke on the subject, "Influence of School Life on the Curvature of the Spine." The address was a scientific discussion of the causes and prevention of curvature. Dr. McKenzie deplored the number of cases in which the standing physician approaches more or less closely to what Bernard Roth has aptly termed the guerilla type of figure—abdomen protruded and head shoved forward.

The general discussion of the paper was opened by Dr. Fitz, who said that parents and teachers should take severe means, if necessary, to see that the spines of their children are kept



Dr. C. E. Ehinger, West Chester, Pa., President, Dept. of Physical Training, N. E. A., 1897-98.

straight. Many practical questions were asked and answered respecting the style of writing and desks best adapted to pupils.

This discussion brought to his feet Supt. Aaron Gove, of Denver, Col., who aroused much interest in the audience by his pointed questions and discussion. In his talk he intimated that he thought curvature was caused more by home than by school environment. Supt. Seaver, of Boston, thought that much benefit was to be derived from scientific lighting and the adjustable desk. Dr. Ehinger, the president, and Dr. McKenzie closed the discussion.

Play in physical education was the subject of a paper by Supt. G. W. Johnson, of Andover, Mass. He distinguished between play and games, and showed how both should be used in school work. Dr. G. W. Fitz, of Harvard, opened the discussion of the paper. He was followed by Miss Stonerod, of Washington, and others.

The election of officers for the ensuing year were as follows:

THE SCHOOL JOURNAL is published fifty times a year. As there are fifty-three Saturdays in 1898, three numbers will be omitted, no papers being issued July 30, August 6, or August 13.

President, Dr. G. W. Fitz, Harvard; first vice-president, Dr. W. O. Krohn, of Illinois; second vice-president, Miss Ellen LeGarde, Providence, R. I.; secretary, Miss Rebecca Stoneroad, Washington, D. C.

SECOND SESSION.

Dr. William T. Harris, U. S. commissioner of education, was the first speaker. His subject was "The Effect of Exercise on the Vital Organs." He contrasted the motives for physical training among the ancients (preparation for war among the Romans, accumulation of beauty among the Greeks) with our own idea of establishing nerve energy. To acquire this



Dr. Geo. W. Fitz, Harvard University. President-elect, Dept. of Physical Training, N. E. A., 1898-9.

energy, he urged that exercise should not follow too closely after eating; that it should not be excessive; that plenty of sleep should be indulged in, gymnastics not being taken very early in the morning; that it be a matter of mental rest, not a forcing of the will. He agreed with the idea, that all other things being equal, the man who takes the most out-door exercise will live the longest; and on this ground he urged that outdoor recesses be continued, not put aside for calisthenics, which are also valuable, in their place. The putting aside of all alcohol, tobacco, and narcotics, the speaker considered of vast importance.

Dr. Henry Ling Taylor, of New York city, spoke upon the same subject. As Dr. Harris had warned against excess of exercise, Dr. Taylor touched principally upon the value of proper exercise. During school age, while play should be indulged in, formal physical training forms an essential part of a solid education. During maturity and decline, the monotony of too specialized labor, as well as other restraints preventing development, may be mitigated by the pursuit of some interest during leisure hours, involving varied exercise out of doors, such as climbing or rambling with rod, gun, or camera, or the indulgence of a taste for nature—rocks, plants, insects, or birds.

Dr. Lightner Witmer, of the University of Pennsylvania, reported some experiments made in the laboratory of that institution, regarding the effect of action upon the brain. He remarked that the mind of woman had to be stimulated in so different a manner from that of man that the experiments revealed a very different action. Dr. Witmer affirmed that action and reaction are much more rapid in man than in woman, and attributed the difference to the man's possession of greater brain activity. However, he acknowledged, that in other particulars woman's brain might be active, and she proves herself as intelligent as man.

Dr. E. M. Hartwell, of Boston, Mass., opened the discussion, calling attention to the fact that too many boards of education and parents seem to think that physical training is merely a means of occupying time and keeping children out of mischief; but it is only a means of building up brain and muscle systematically, and should be introduced into the schools for its pedagogical value. He thought that physical training should not take the place of play, nor play the place of physical training; in other words, that recess was one thing, training, another. The discussion was continued by Dr. Pitts and by various members of the audience.

Music Department.

The music section of the N. E. A. was treated to a fine musical program, and found a most appreciative audience.

"Music as a Stimulating Factor in the Development of the Child" was the subject of a paper by Mr. E. W. Pearson, supervisor of music, of Philadelphia.

Miss Marie Ruff Hofer, of Chicago, read a paper on "What Makes Music, and What Makes Children Musical?" in which she said, among other things: "Find the purpose of the song, and out of it make the interpretation. Artistic presentation is the best lesson that can be given to a child. The song should tell a story, or an incident. Words should be considered first. The music it is set to is second. We should not try to get too fine musical expression; we should have good music for our children, instead of pretty tunes. Out of good musical material will come an appreciation of the study of harmony."

An abstract of Mr. Congdon's paper on "Individual Singing" appeared in *The School Journal* last week.

SECOND SESSION.

Dr. A. E. Winship, of the "New England Journal of Education," read a paper on "School Music in Character Making." School music, he said, brings the populace up to the enjoyment of the greatest of arts. The influence of good pictures is deep, but not so great as that of good music. It is almost as absurd to have schools without sunlight as without music. Music is of greater service to mankind than any other art. It rests the body, balances the mind, and quiets the soul. There is no anger in song. The tendency in music is to make one beautiful. A complete enjoyment of music represents health of body, mind, and disposition. Music has greater responsibilities in reforming character than any other study in the schools.

Mrs. Carrie B. Adams followed, her subject being "The Next Step, What Shall It Be?" School music, she said, has at last come into its inheritance; but we must not rest from our labor, as the success we have met with makes our responsibility the greater. The importance of the teacher's influence is great in the subject of music. Every school should have lessons from the special teacher, but this is not always possible. The average normal school does little for the public-school teachers, as they go there with little previous training. School children should have good voice training. To the normal school we must look for the training of teachers' voices. The great point in song singing is to bring out the thought of the song. Use the history and biography of music to interest the boys, whose voices are changing. A good teacher is often more successful in teaching music than a good musician. The special teacher must have the assistance of the regular teacher if music is to be used to its fullest advantage in the schools. We have laid the foundation upon which to erect an educational edifice of more varied beauty and usefulness than has yet been constructed, and the pillars of the structure will be based on public-school music, which shall include mind, voice, and soul culture.

Miss Sarah Louise Arnold, of Boston, opened the discussion. She believed that the one thing needed to put music in its right place is to make the regular teacher believe that music is an essential, as much as any other study. Music is an essen-



Sarah Louise Arnold, Supervisor of Public Schools, Boston.

tail. What does it do for the children? One hard task is to secure the habit of attention; to see the note, fix its position, its pitch, and its length requires intense attention. Use your music to secure attention; it will help to get attention in other studies; help to retain what they have learned. Use the music to tone down and quiet the school, beginning with merry

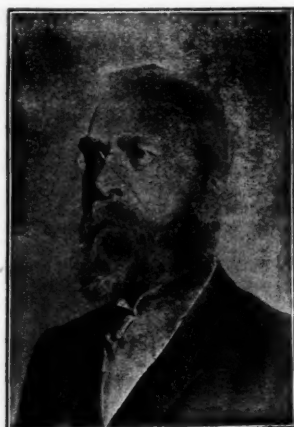
There will be no issue of this journal during the weeks ending July 30 and August 6 and 13. The next number will appear on August 20.

songs and going to the quiet ones, when things are going wrong in school, instead of scolding. It will bring sympathy and a willing spirit much more certainly than the fault-finding will. It means that when they sing together a sweet unity is secured; a forgetting of self; they merge themselves into one under the control of the teacher. This oneness is a great thing for each child, and for the atmosphere of the school-room. The task of the twentieth century is to learn how to live together in peace and happiness, and music will be one of the most potent agencies in bringing this about.

The following were elected officers for the coming year: President, P. C. Hayden, Quincy, Ill.; vice-president, Mary A. Grandy, Springfield, Mass.; secretary, Lucy Robinson, Wheeling, West Va.

Department of School Administration.

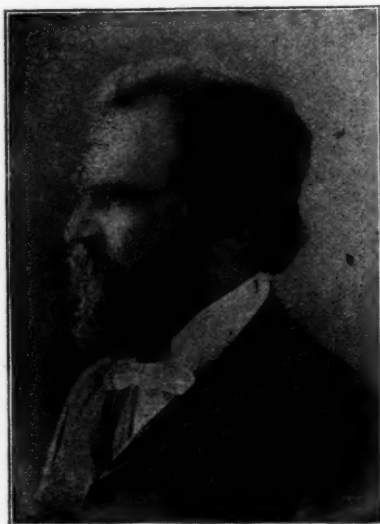
The School Administration Department met at Columbian university, and was opened by Pres. Brandegee, of Utica, N. Y., who reviewed the history of the school-board organizations. Harvey H. Hubbart, of Philadelphia, read a paper on "What Kind of Centralization, if any, will Strengthen Our



Dr. C. M. Woodward, Washington University, St. Louis, Mo.

School Systems?" He dwelt upon the importance of breaking the influence of political activity and concentrating duty as well as responsibility.

Mr. W. G. Webster, of New York, opened the discussion by stating that he disagreed with the paper only in that it was not radical enough. Mr. W. G. Bruce was opposed to all centralization of power, on the ground that it reduced the power of school boards and increased that of the superintendent. Dr. Woodward, of St. Louis, believed in investing the superintendent



Dr. W. N. Heilmann, Elect Superintendent of the Schools of Dayton, Ohio.

ent with more power and holding him more responsible. Mr. Prince, of Massachusetts, said that centralization is a process which grows steadily with the progress of civilization. Mr. Charles Bulkley Hnbell, the president of the board of education of Greater New York, stated that he worked under both the old and the new systems, and that the evils in the old were so apparent that he welcomed the new.

Mr. Job Barnard, of Washington, read a paper on "Manual Training," which is printed in full on another page.

Mr. C. M. Woodward, of St. Louis, spoke on the value of the study to the extent of which it is pursued in that city, and proposed improvements.

The following officers were elected: President, E. F. Bradt, Ishpeming, Mich.; first vice-president, C. B. Hubbell, New York; second vice-president, John F. Hughes, Utica, N. Y.; third vice-president, William S. Mack, Aurora, Ill.; secretary, William George Bruce; executive committee, P. N. Sigler, chairman; Harvey H. Hubbert, Philadelphia; Edward Welden, Bethlehem, Pa.; C. M. Woodward, St. Louis, Mo.; Job Barnard, Washington, D. C.; A. Lawrence Lowell, Boston, Mass.

Mr. A. Lawrence Lowell, of Boston, spoke on "The Professional and Non-Professional Bodies in Our School System and the Proper Function of Each." A discussion followed, in which Messrs. C. M. Woodward, of Missouri; Mott, of Indiana; William S. Mack, of Illinois; Job Barnard, of Washington, and Harlan P. French took a part. Mrs. Edwin P. Seaver, of Boston, believed in school-board executive sessions when the appointment and dismissal of teachers is considered. Mr. Job Barnard and Mr. John E. Brandegee discussed the question of teachers' salaries. Mr. Sigler held that the best teachers should be secured, no matter where they hail from, but preference should be given to local teachers when all things are equal.

Mr. Harlan P. French thought that the method adopted was a good one. Character and fitness should determine the selection of teachers and nothing else.

Mr. Hughes, of Utica, N. Y., recommended that the subject of heating and ventilating be taken up at next year's session as a special topic.

Department of Manual and Industrial Education.

President E. O. Sisson, of the Bradley Polytechnic Institute, Peoria, Ill., opened the meeting. Prof. J. L. Snyder, of the Michigan Agricultural college, Lansing, Mich., spoke of education for the industrial classes. He attempted to prove that the public school system does not recognize sufficiently that the industrial classes are the backbone of this nation, and does not give them the encouragement and help that it should. Supt. E. Mackey, of Reading, Pa., took exception to Professor Snyder's idea that the public schools should teach manual training from an industrial standpoint, claiming that the culture side of manual training should take the precedent, as the practical part is that which is the most prominent now before the public.

Mrs. Ellen H. Richards, of the Massachusetts Institute of Technology, Boston, Mass., spoke on "Domestic Science as a Synthetic Study for Girls." She said in part: "We, who have watched young women step from the college into the home are dimly conscious that in the step is often an element of tragedy, and that the ignorance of new conditions frequently gives rise to competitions in memory which years will hardly obliterate. In this country the appeal, not for less but for a broader education has come from women themselves, and mothers, after trying experiences, beg for their daughters a more absolute knowledge of wise living than that which they had when they were receiving their training. It is this demand which has forced practical home training into our educational institutions, and which undoubtedly will in a few years make permanent science an art of its own." This paper was discussed by Miss Bowman, of the Ohio State university, Ohio.

"Manual Training in Horticulture," by Prof. R. Lazenby, of the University of Ohio, Columbus, followed: "It is generally conceded that there are three quite distinct factors in any well rounded system of education. These are knowledge, training and culture. In other words, to know something, to do something, and to be something, comprises a large part of the duty of man." Mr. Lazenby thought there was too much teaching and too little training. Our present national crisis had demonstrated that the manual as well as mental training that is given by our military and naval schools is just what best fits our youth for eminence and renown as a military or naval commander. But if this be true for the art of war, it cannot be any less true for the peaceful arts and great industries of our times. A strong plea was made for manual training in horticulture. The hammer and the saw should be supplemented by the hoe and the rake; the budding knife and the pruning shears as well as the plane and chisel should be used to educate the hand and eye.

Pres. George T. Fairchild, of the State Agricultural college, Manhattan, Kan., believed that horticulture shows, as few things do, how nature handles her powers. Its pursuit by children opens up a world of activity. It touches the whole system of geology, and how we should teach geography. It is also adapted to every age and here it is where nature study at first hand, has an opportunity to permeate our whole school system. Prof. George

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A. Robbins, of Chicago, as chairman of a committee appointed a year ago read a report upon "Hindrances and Helps to Manual Training and Industrial Education." He considered it under topics of inefficient supervision, the engaging of mechanics for teachers, the employment of untrained teachers, how its advocates retard, the conservatism of teachers, the disrespect for manual training, and the lack of funds; the influences which have promoted manual training in the past have been state and national aid, private enterprise, educational associations, trained teachers, and public exhibitions.

Around the sides of the room were arranged exhibits of wood-work, bent iron, large work, sawing, mechanical and freehand drawing. Among the schools making an exhibit, were the Pratt Institute, Brooklyn, N. Y.; Baltimore Polytechnic; Rochester Athenaeum, Rochester, N. Y.; Jacob Tome Institute, Fort Deposit, Md. Townsend Industrial School, Newport, R. I.; West Brook, Maine Grammar schools, the public schools of East Orange, N. J., Hoboken, N. J., and Brockton, Mass. The city schools were well represented in the various lines of manual training and domestic arts.

The most valuable papers presented at the meeting of this department were those by Mr. Charles H. Keyes, of Holyoke, Mass., on "Time Tests of Educational Manual Training," and the one on "Manual Training in Character Building," by R. C. Bates, of Elmira Reformatory. Extracts from the former are published on another page of this number. The latter, by Mr. Bates, appeared in the "Journal of Sociology" for March (or April), 1898.

Library Department

The library department opened with the report of the committee on relation of libraries and schools. It was recommended that the committee be continued, and that it be recommended to make a careful examination of the relations now existing between libraries and schools, examine with care into such questions as:

How to induce libraries to acquaint themselves with the needs of the school-room; and how to induce teachers to make themselves more familiar with the possibilities of public libraries.

How to encourage normal schools to give more instruction in the use of books in libraries.

How to induce high schools, colleges, and universities to establish "schools of the book."

How to promote the introduction of school-room libraries.

How to induce more public libraries to open special departments for children and teachers.

How to increase the interest of parents in the reading of their children.

The discussions were followed by the papers of Mr. Hardy, Mr. Greene, and Miss Chase.

Pres. L. D. Harvey announced that he had secured the desired appropriation of \$500 for next year from the council of the N. E. A. Mr. Spofford, F. A. Hutchins, of Wisconsin, J. H. Van Sickle, of Colorado, Sherman Williams, of New York, O. F. Barbour, of Illinois, and Mr. McGinness, of Pennsylvania, took part in the discussion.

Natural Science Department.

In the absence of Pres. Paul C. Freer, of Michigan State university, the opening address was read by Prof. Little. The subject was "The Relation of Science Education in the Secondary Schools to that in the College and University." Mr. W. C. Hay, of the Central high school, of Washington, spoke on "The Teaching of Biology in the High Schools." Discussions of the preliminary reports of the Committee of Ten, and its sub-committees, occupied the remainder of the session.

Business Department.

The Business Department opened with an address by D. W. Springer, of Ann Arbor, Mich., the president of the department. He made a plea for business education in the high schools of this country. The history of the secondary school was reviewed, showing their rapid growth. Statistics were given, showing the fact that one million of boys between the ages of 15 and 19 were not in schools, or engaged in any of the gainful pursuits. The high school, he said, has become the finishing school for 85 per cent. of the number enrolled. This is a business age. With 12,000,000 voters in the land, there are 1,000,000 persons so engaged in business as to have commercial ratings. Fifteen per cent. of our population are engaged in lines of business relating to trade and transportation, and but four per cent. in the professional classes. The larger percentage of those who leave school before finishing their secondary education are boys, and they leave because courses of study that are offered do not attract them. This business training should not be for mere clerks or bookkeepers, but should endeavor to offer the same professional training in business as is now offered in the high schools for the intellectual vocations. It should be of equal length with the other courses offered, and should be furnished with equally good appliances as are the other sources, and should lead to corresponding courses in our higher schools.

Mr. Robert C. Spencer, in introducing Mr. Lyman P. Gage, the secretary of the U. S. treasury, said: "The institutions

and opportunities of our country have helped to produce men equal to the great emergencies of the age. The young man who knows how to rightly use the educational privileges at hand prepares himself for the larger opportunity, the higher use, and the more eminent career. No one knew better how to seize and appropriate the best of the privileges than the gentleman whom I introduce to you, the Hon. Lyman J. Gage."

AN ADDRESS BY THE SECRETARY OF THE TREASURY.

Secretary Gage said: "I remember as well as if it were yesterday, when I was a lonesome young man without friends and without a job in the city of Chicago, and found my way into a business college where the gentleman who has just spoken was a teacher, and an important factor. There were many teachers in that college, but through all those years I chiefly remember him. I say it in all frankness, my life has been largely shaped by the instruction and influence of this man."

"There are evidently three important, but well-differentiated, parties who may entertain expectations as they relate to education. These parties are the educators, the educated, and the great public to whom both the others are allied. In reflecting on the theme, I thought to take these parties and consider from the standpoint of each what remarkable expectations each might be justified in cherishing. There is a well-used phrase which has sometimes been found in bad company, to this effect: What is there in it for me? And I ask myself this question as it affects the educator or the teacher: What is there in education—business education, or other, for the teacher, or the school? The answer came: Much of labor, much of anxiety, many chagrins, much work seen in advance to be comparatively hopeless, as is the tilling of barren ground; much lack of appreciation; many evidences of absolute ingratitude."

"Without attempting to be very nice in the classification, education may be considered under four divisions: Manual training, business education, scientific education, and classical education. Now, these all mark in their progressive order the advancement of the mind and the progress of man in comprehending himself and his environment. It is better that the many should possess moderate intelligence than that the few should be superlatively wise."

"In the business school, as in manual training, perhaps even to a higher degree, we learn that happiness and success come by observing and obeying the truth as it is revealed in the natural relationship of nature to man and of man to his fellows."

"Without overstatement, we have the right to expect from the graduates of business schools and colleges a thorough theoretical knowledge of all machinery, tools, and methods by which real business life, in its multiplied forms, is carried out. We have a right to expect that the young men and women will go out from these schools with their moral conceptions of the true, the beautiful, and the good increased and strengthened."

"But what of business success? of material advancement? of the acquisition of wealth, power, and fame? Can we confidently expect these as the uniform, never-failing result of a thorough business training? The answer must be in the negative. Such results cannot be guaranteed. To be prepared to meet the requirements of time, place, and opportunity, this is to have really achieved, whether the large place, the large opportunity comes or not. With business education, more general, we may expect a better order of business men in all places, both great and small. We may expect less waste, fewer insolvencies. The world's work is to be better done; the individual life dignified and exalted by higher ideals and purer ethics will tend more and more to reach that high plane which we may well believe it to be the purpose of God that we will attain."

A MODEL CURRICULUM.

Mr. J. N. Mehan briefly outlined the work of the Committee of Nine, in preparing a model curriculum for business colleges. He believes it is now ready for reference to the Committee of the Whole for final publication as the best thought of selected exponents of the topics considered.

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Seekers after gold are often disappointed. Seekers after health take Hood's Sarsaparilla, and find it meets every expectation.

THE SCHOOL JOURNAL

(Established 1870.) published weekly at \$2.50 per year, is a journal of education for school boards, superintendents, principals, and all teachers who desire to have a complete account of all the great movements in education. We publish THE TEACHERS' INSTITUTE, monthly, \$1 per year; THE PRIMARY SCHOOL, monthly, \$1 per year; EDUCATIONAL FOUNDATIONS, monthly, \$1 per year, and OUR TIMES (Current Events), monthly, 30 cents per year.

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New Books.

The course of botanical study outlined in the "Laboratory Manual in Practical Botany," by Charles H. Clark, A.M., D.Sc., principal of Windsor Hall school, Waban, Mass., will give the student a general view of the subject, and at the same time lay a foundation upon which more advanced studies may be built. It follows the method recommended for secondary schools by the Committee of Ten, and already applied in leading public and private schools. Beginning with simple laboratory studies of the higher flowering plants, by the practical examination of a few typical forms, the pupil acquires facility in analysis, and lays a good foundation for further study of the vegetable kingdom. The book is well balanced, gives no undue prominence to any part, and provides, at all points, a sufficient amount of practical work to aid the teacher in developing the subject, and at the same time to allow him to follow his own ideas in selecting lines of original work and research for his class. (American Book Co., New York. 96 cents.)

The second volume of "Specimens of the Pre-Shakespearean Drama" has been prepared by John Matthews Manly, professor in Brown university. The book belongs to the Athenaeum Press series, which is intended to furnish a library of the best English literature from Chaucer to the present time in a form adapted to the needs of both the student and the general reader. It contains "Roister Doister," by Nicholas Udall; "Gammer Gurtons Neddle," by Mr. S., Master of Arts; "Cambyses," by Thomas Preston; "Gorboduc; or, Ferrex and Porrex," by Thomas Sackville and Thomas Norton; "Campaspe," by John Lyly; "James the Fourth," by Robert Greene; "David and Bethsabe," by George Peele, and "The Spanish Tragedie," by Thomas Kyd. The text has been kept as near the original as possible, but all possible helps have been supplied for the understanding of it in the introduction, notes, and glossary. (Ginn & Co., Boston.)

Persons who wish to keep the run of religious thought will be glad to learn of the publication of a new edition of the famous "Bremen Lectures." These are lectures on the great religious questions of the day by a number of European divines and translated by Dr. David Heagle, of the Southwestern Baptist university. They form an exceptionally strong and successful argument in support of the main truths of the Christian faith. Among the topics treated are the Biblical conception of God, miracles, the person of Jesus Christ, the resurrection of Christ, the authenticity of the gospels, etc. A great many improvements have been introduced in the present edition, and portraits have been given of the distinguished authors of the essays. (American Baptist Publication Society, Philadelphia.)

In the preparation of "Elements of Geometry," the author, Prof. Geo. W. Hull, kept in view that the power of deductive reasoning should be attained by the study of geometry; he also had in view the student's needs in the acquisition of this power. As a student beginning the study of geometry requires a great deal of aid before he can give a clear and logical demonstration, the reason for each step is given in small type immediately below the statement, in the first few theorems. A large number of well-selected and well-graded theorems for original thought are given in each book; diagrams are given for a few of these, and suggestive references for many others, in order to lessen the difficulties of the young student. (E. H. Butler & Co., Philadelphia.)

Two well-known British chemists, G. H. Bailey and William Briggs, have contributed "The Tutorial Chemistry—Part II., Metals," to the University Tutorial series. The main features of this book are as follows: (1) The section devoted to chemical physics includes many subjects that are not commonly brought before the student at so early a stage; (2) the elements are taken in the order suggested by the periodic system, and the characteristic properties of each family is summarized; (3) a list of experiments is given in the appendix, selected with a view to illustrate the text. The chief innovation is the prominence given to chemical physics. (Hinds & Noble, New York. \$1.00.)

In the third book, in the eight graded books in the series of Stepping-Stones to Literature, fables and fairy tales predominate, including a number of Hans Christian Andersen's inimitable stories, dear to all childhood. Other fairy tales are from the French, and there is a bright story by Mrs. Ewing, another of the children's favorites. There are several charming incidents of child life in city and country; there are telling fables, each with its suggestion of a moral deftly woven in. The poetical selections are unusually attractive. Shakespeare, Browning, Wordsworth, Coleridge, and Longfellow, among the leading poets, and the Cary sisters, Mary Howitt, Celia Thaxter, Bayard Taylor, and other lesser lights, are represented by choice poems, not beyond the range of third-year

readers. The illustrations include some fine reproductions of masterpieces by Raphael, Meyer von Bremen, Herring, Schreyer, Dieffenbach, Laux, Munier, and others. (Silver, Burdett & Co., Boston. 12mo., 224 pp.; introductory price, 50 cents.)

The very popular series of Wentworth algebras has been supplemented by a "A New School Algebra," which contains some noticeable features. The first chapter prepares the way for a treatment of simple integral equations with one unknown member. In the first two chapters only positive members are employed, and the beginner is led to see the practical advantages of algebra before he encounters the difficulties of negative members. Further on, the real nature of subtraction is shown to be counting backward, and the real nature of multiplication is forming the product from the multiplicand precisely as the multiplier is formed from unity. The chapter on factors has been made as complete as possible for an elementary text-book, with a view to shorten subsequent work. The exercises throughout the book are carefully graded, sufficiently varied and interesting, and not so difficult as to discourage the learner. (Ginn & Co., Boston.)

An effort to lead kindergartens into a use of such songs as reflect the ideals of universal truths, which the kindergarten aims to present to the child by means of stories, songs, pictures, and games, is made in "Songs of the Child World," by Jessie L. Gaynor. Froebel's "Mother-Play Book" has furnished the standard of thought, and a special effort has been made to have the child sing of ideal experiences, that he may grow into a love of harmonious living at the same time that he grows in love of harmonious sounds. The songs are classified into songs of the family relation, of the state relationship, of the trade world, of the church or universal relationship, of the wool, Christmas songs; songs of earth, water, air, light, seasons; songs for games, greeting songs, gift songs, occupation songs, hand plays, and musical commands. The words were furnished by Alice C. D. Riley and the kindergarten thoughts by Helen A. Lloyd. (The John Church Co., New York.)

A well-written story of the American Revolution, like Cyrus Townsend Brady's "For Love of Country," will always find plenty of readers. It makes vivid to the reader events on sea and land; especially the battle between the Randolph and the Yarmouth, and the campaign of Trenton and Princeton, and presents a truer picture of Washington than may be obtained from some histories. (Charles Scribner's Sons, New York. \$1.25.)

A superintendent recently gave the following reasons why he prefers "Heath's Natural System of Vertical Writing": "It does away with all spacing and all need of specially ruled paper. It is simple and natural in its treatment of the subject of penmanship. The letters are such as those who are obliged to write very rapidly come of themselves to make after acquiring the formal style of the more elegant and elaborate systems. Children take to it, and it is especially adapted to speed." The writing is legible, simple, and elegant. The system is comprised in six graded books with teacher's manual. (D. C. Heath & Co., Boston.)

A book on "Punctuation," small enough to be carried in the pocket easily, will be a great convenience for writers, proof-readers, printers, stenographers, and others. The author, Kate O'Neill, has sought to cover all the general rules of punctuation, and most of the exceptions. The book has been compiled from the latest authorities, and subjected to the criticism of many of the most prominent educators in the country, and the rules have been endorsed by teachers, editors, and proof-readers as clear, concise, and complete. (A. Lovell & Co., New York. 50 cents.)

"An Imperial Lover," by M. Imlay Taylor, is a story that introduces the reader to the Russian court at the time of Peter the Great, and makes him acquainted with some historic personages, including the emperor himself. It is a bright, well-written story that cannot fail to attract and hold the interest. (A. C. McClurg & Co., Chicago. \$1.25.)

Under the title of "The Arrows, or Teaching as a Fine Art," has appeared a small volume containing the substance of three addresses delivered by Addison Ballard, D.D., professor of logic in New York university. The book will be welcomed by many a teacher seeking help and inspiration. (A. S. Barnes & Co., New York. 75 cents.)

The two leading ideas in Charles De Garmo's "Language Lessons" is to furnish progressive exercises in composition and an inductive approach to grammar. These exercises provide for the pupil a language experience, instead of presuming one that he does not have. The language exercises are based on the occupations of men, the facts of nature, and of history, and upon a few masterpieces of literature. The composition exercises are made very simple at first, and increased in difficulty by gradual degrees. (Werner School Book Company.)



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Interesting Notes.

Inventors of Flying Machines.

"The signal office of the war department at Washington is said to be deluged these days with suggestions and plans, with balloon, flying-machine, and other warlike devices, all of which appear to have some fatal defect," says "Electricity," New York. "One genius is positive he has solved the problem of aerial navigation, and thinks his airship would be of inestimable value to the government in case of war. His machine is in the form of a fish shaped balloon, with electrically operated propellers. Another would-be inventor suggests putting a powerful magnet in a torpedo which would lie along the shore. A steel ship passing in the neighborhood would, in the opinion of this genius, draw the torpedo up to its side, to be immediately followed by an explosion and the sinking of the vessel. There is certainly nothing like having a vivid imagination.

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Whoever wants soft hands, smooth hands, white hands, or a clear complexion, he and she can have both: that is, if the skin is naturally transparent, unless occupation prevents.

The color you want to avoid comes probably neither of nature or work, but of habit.

Either you do not wash effectually, or you wash too effectually; you do not get the skin open and clean, or you hurt it.

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A Magnetic Island.

Near the coast of Denmark there is a little island, Bornholm by name, which is really a big magnet. When the mariner approaches it the needle of his compass begins to act in the strangest and most unaccountable manner and will invariably point to the island instead of pointing north. This makes the neighborhood a dangerous one because if it happens to be dark and stormy the pilot may guide his ship straight on the rocks thinking he is going in the right direction. Bornholm is composed almost entirely of magnetic iron and has the same effect on the compass needle as a powerful horseshoe magnet. This influence is not confined to the near vicinity of the island; the mariners on the Baltic sea dread it and as soon as they sight Bornholm they discontinue steering their course by the needle and turn instead to the well-known lighthouses to direct their craft. The magnetic influence of this ore is so powerful that a needle, if suspended freely in a boat near the bank, will point directly down, and, if it is not disturbed, will remain perfectly perpendicular.—"New Ideas."

Breeding Reindeer in Alaska.

If the new industry of breeding reindeer in Alaska for service in the gold fields is properly engaged in, it will make the country a very different place to live in than it is at present. The government owns nearly all the deer there now, and they are used for transporting mails, but private enterprise has tried the experiment of introducing them for other commodities with suc-

cess. There are probably a thousand deer in the government's herds at Fort Clarence, but the country will support millions of the gentle little animals that are so well adapted to the rigors of the Alaskan climate. They find plenty of nourishing food in the moss and entangling vines that cover the ground like a network, and when it is covered with snow they get at it by digging the snow away with their horns and hoofs. They make good beasts of burden, and are besides very fleet-footed. For these and other reasons the reindeer is the most serviceable and valuable animal for the arctic regions. Their flesh is considered a great table delicacy, either fresh or cured; their milk is as good as that produced from any animal, and the skin is soft and warm, and can be used for both clothes and shoes.—"New Ideas."

Making Steel Pens.

Pens are made by machines of wonderful ingenuity. The steel is cut into ribbons as wide as the length of one pen; these are fed to machines which cut out the blanks, then fashion, stamp them, split the points and place the maker's name on the backs. The pens are now complete save the annealing, and this forms a separate operation. After being annealed they are counted and placed in boxes. A machine has been invented for performing both of these operations.

The Audibility of Thunder.

The audibility of thunder and the conditions governing it are interestingly discussed by a technical publication. While

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lightning, it says, may be seen and its illumination of clouds and mist may be recognized when it is even 200 miles distant, thunder is rarely audible more than ten miles. The thunder from very distant storms, therefore, seldom reaches the ear. The reason of the great uncertainty in the audibility of thunder is not difficult to understand. It depends not merely on the initial intensity of the crash, but quite as much on the surroundings of the observer, even as in the quiet country one will observe feeble sounds that escape the ear in a noisy city. Perhaps the most curious and important condition of audibility is that the thunder wave of sound shall not be refracted or reflected by the layers of warm and cold air between the observer and the lightning or by the layers of wind, swift above and slow below, so as to entirely pass over or around the observer. Sound, in its wavelike progress obliquely through layers of air of different densities is subject to refraction, and this refraction may occur at any time and place.

Paper Paving Blocks.

The good roads movement throughout the country has once more started men to experimenting with new forms of paving material, among which are paving blocks made from pulp, says an exchange. Attempts were made in foreign countries in 1893 to mould paving blocks from pulp and with partial success. In 1894 a section of a street was paved in Washington, D. C., with paper blocks. Owing to the crudeness of the methods in manufacturing the blocks the experiment did not succeed. Since that time several new forms of pulp paving blocks have appeared. In most cases the work of converting the material into pulp and the pulp into substantial paving blocks is done as a sort of an experiment on the part of an enterprising paper or paper pulp manufacturer. Flasks, presses and baking ovens are built and the blocks made cube shape are compressed, dried and laid.

Uses for Liquid Air.

By means of liquid air the effect of temperature upon metals can be studied with ease, and it is seen that temperate has a great deal to do with ductility, tenacity, and hardness. When subjected to very low temperatures the colors of many substances change, and some of the most brilliantly colored salts become nearly white when brought to the temperature of -191 degrees C. Again, it has become possible to test the theory of the electrical conductivity of metals at very low temperatures and to verify the laws which, before, were largely based upon theoretical considerations and tests between comparatively high limits. All these, however, are laboratory experiments. But would not any one of them justify the thought and work which have been devoted to the production of liquid air? In the line of the practical application of liquid air little has been done, but the possibilities seem great. When drawn from the machine the liquid is composed of a mechanical mixture of oxygen and nitrogen in the proportions of about 1 to 5. As the boiling point of ox-

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"He had small skill o' horse flesh who bought a goose to ride on." Don't take ordinary soaps for house cleaning. THE PROPER THING is SAPOLIO. —Try a cake of it, and be convinced.—

xygen is slightly higher than of nitrogen, the latter evaporates first, and after a few hours' exposure the remaining liquid contains about 75 per cent. of oxygen. There seems to be no reason why this liquid should not be expanded into cylinders, and then used for the oxy-hydrogen light and other commercial purposes, where it would compare very favorably in purity with gas now prepared by chemical action. As a refrigerant the liquid will probably have a wide field, the apparatus for its preparation being very simple and requiring little attention. Its use as a means of transferring energy has been from the first one of the problems to be worked out, and while nothing definite has been determined in this line, yet it is believed by persons who are as capable of giving a judgment as any that the day is not far off when small motors such as are now used for driving street cars and light machinery will be run by the boiling of liquid air.—"American Machinist."

Concerning California.

Probably California gives rise to many conflicting reports. One person will tell you that it is a perfect paradise,—a garden of Eden, and that if once you enter its halcyon borders nothing short of it will ever again satisfy you; that the nightingales sing you to sleep, that the mignonette and heliotrope climb in at the upper story windows, and that luxuriant tropicalness abounds on every hand; that you never suffer from heat or from cold;—that in short, it is the *summum bonum* of all that this country has to offer.

Occasionally, but it is rare, you will come across those who aver that the "bleak New England shore" is infinitely preferable; that the climate is enervating, the fruit devoid of taste, the mosquitoes unconscionably stupendous, the fleas legion, the damp, rainy days thoroughly dispiriting, the direct rays of the sun unbearable,—and that, generally speaking, there is no pleasure or profit to be found in it.

The facts in the case are these:

First, as to the fruit. Much of it is tasteless, owing to excessive irrigation.—For instance, the strawberries as a rule are about as palatable as pumpkins,—and just about as fragrant. The peaches are worse. However the poor fruit is improving, and will in time, perhaps, equal the famous California grapes and figs.

As for the climate it is delightful if one can stand it,—that is, if one does not feel utterly "done up for" under its influence. Most people indeed like it, and seem to thrive under it. As for others,—well, its effect can only be denominated as excessively numbing and soporific. I, my self, can far more easily walk five miles in the East than as many blocks in California.

However, that does not change the fact that always in the shade it is deliciously cool in summer, and always in the sun, "just the right temperature" in the winter.

Now for the flowers. They are beautiful to look at, but like some of the fruit mentioned, their charm ends there. That is to say, there is no fragrance, or but very little. Probably this, too, is due to excessive irrigation. Imagine coming upon acres of strawberries in the East, or immense beds of heliotrope or mignonette, and perceiving no fragrance. And yet this is as it is in California.

In regard to the luxuriant foliage about which one hears so much,—if you pass from the mountains of the north down into the valleys of the south, you doubtless are impressed by it. When you enter the state from the south, however, nothing more inviting meets your eye for hundreds of miles than a dreary, illimitable desert, through which dusty roads wind forlornly around clumps of sage brush. There are now and then irrigated spots, and in them are trees. "But oh, the difference," you think, "between these straight, blue, up-and-down eucalypti, and the majestic, verdant oaks and graceful maples home."

One of the things that impressed me very unpleasantly and disappointingly was the appearance of the orange orchards. I had made up my mind that in them I should find enough beauty to make up for some of the limitations so painfully apparent. Far from it. I beheld only here bleak plowed fields, set out with straight, up-and-down "Noah's Ark" trees.

I said the climate was delightful "if one could stand it." So it is—but I never got over shivering until September, and I entered the state in June. Not till then was I able to sit down in the house without a shawl or cloak on without feeling decidedly uncomfortable. And not for three years was I able to stand the chill of this semi-tropical climate as well as a native.

Lastly for the seasons, wet and dry. Contrary to my expectations, and the ideas of people generally, it did not rain without ceasing when once it had commenced. Instead, there were two or three days of rain (usually November,—occasionally December, inaugurated the rainy season), then several weeks' dazzling sunshine, then a day or two more of rain, then a week of sunshine, and so on until March, April, or May.

I have not drawn, on the whole, a very glowing picture of "Our Italy." In fact, I find that my account differs as much from those generally current as does the text of certain old time geographies, which state that "California is a wild region covered by fogs as damp as they are unhealthy, in which, nevertheless, live and thrive anthropophagi," from the text of their contemporaries which asseverate just as emphatically that it has a most delightful climate and is inhabited by the peaceablest and most kindly natured people.

But there is one thing upon which I can agree with the most conservative and the most "blinded." That is that there is a glory and glamour and fascination about a sunny, southern California day (no matter how you feel under it), with which nothing else is comparable; and that you are bound to have homesick longings for its rapturous radiance of sun and atmosphere and sky as soon as you get away!

Boston.

Eleanor Root.

The Largest Flower in the World.

The largest flower in the world grows on the island of Mindanao, one of the Philippine group. It was first discovered there some years ago by a German explorer. It is a five-petalled blossom nearly a yard wide. At a distance the buds look like giant cabbage heads. A single flower has been known to weigh 221 pounds. The natives call it the bolo. Specimens sent to Europe were recognized to be the species *Rafflesia*, a plant discovered in Sumatra, and named after the English governor of that island—Sir Stamford Raffles. The bolo is only to be found in the neighborhood of Apo, one of the highest volcanoes in the Philippines, or about 2,500 feet above the level of the sea.

Treatment for Anaemic Headache, &c.

"Health," a weekly journal published in London, Eng., in speaking of Antikamnia, says "There is no remedy so useful, and attended with such satisfactory results in the treatment of melancholia, anaemic headache, emotional distress, and active delusions of apprehension and distrust, and it also increases the appetite and arterial tension, and promotes digestion, as well as being particularly serviceable in relieving the persistent headache which accompanies nervousness." One or two five-grain tablets every two hours is the ordinary dose.

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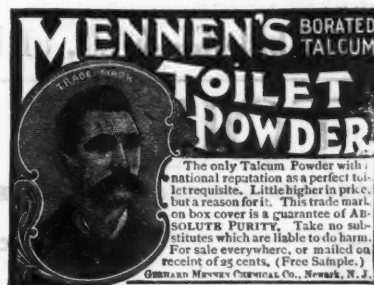
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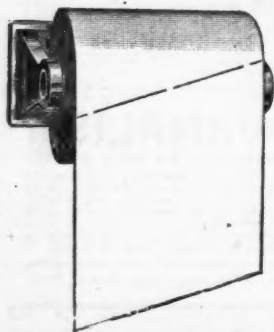
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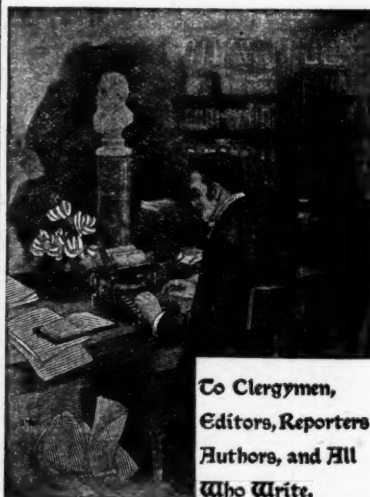
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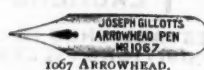
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